UNIVERSITY OF PENNSYLVANIA

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A DISSERTATION

IN GREEK

PRESENTED TO THE FACULTY OF THE GRADUATE SCHOOL IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF DOCTOR OF PHILOSOPHY

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THE Cypriote syllabary of the Classical period was the last direct descendant of the Minoan linear scripts. It appeared in Cyprus about 700 B.C., and remained in use until the first century B.C., when it was displaced by the more flexible Greek alphabet.[1] The syllabary was deciphered in the second half of the past century, with the aid of bilingual texts. Most of the inscriptions are in Greek; a few are in a language which is otherwise unknown, but which may have been spoken by part of the populace of the island in the Bronze Age.[2]

The Classical Cypriote script was syllabic, consisting of signs for open syllables and for the five vowels which we transliterate *a*, *e*, *i*, *o*, and *u*. There were no signs for closed syllables or for consonants alone. There was no means of differentiating between the vowel sounds rendered in Greek by ε, η, or ε̄ (long from contraction or compensatory lengthening), or between ο, ω, or ō. Voiced, voiceless, and aspirated stops were not distinguished graphically. Thus the sign which we transliterate *te* did duty for the Greek syllables τε, τη, τε̄, δε, δη, δε̄, θε, θη, and θε̄, only the context telling which was intended. It is obvious that we are dealing with the clumsy adaptation to Greek of a syllabary which was devised for some other language.

Evans[3] was the first to call attention to the resemblance of many of the Classical Cypriote characters to signs of the Minoan scripts. The chronological gap between the two systems of writing was bridged in 1905 by Sayce,[4] who showed that a script similar to that of the Classical period was in use in Cyprus in the Late Bronze Age, and that this was the connecting link between the Bronze Age scripts of Crete and the Iron Age syllabary of Cyprus. Evans finally determined the precise relationship between the two scripts in 1909.[5] The parent was the Minoan linear script proper; a provincial offspring of this, which Evans styled the "Cypro-Minoan" script, was used in Cyprus during the Bronze Age. This Cypro-Minoan script was the direct ancestor of the Cypriote syllabary of the Classical period. Evans restated the principle, first suggested by him, and carried further by Sayce, that those signs of the Minoan script which are identical with characters of the Classical Cypriote syllabary, and particularly those which can be traced through the Cypro-Minoan script, probably possessed the same sound values as their late descendants.

Several scholars have drawn up tables in which the Minoan and Classical Cypriote signaries are equated, and in which the sound values of the Classical signs are attributed to their supposed Minoan prototypes. In 1915 Sundwall[6] equated thirty-

[1] For the initial date see Casson, *Ancient Cyprus*, pp. 91 f., and compare *AJA*. xliii, p. 357. The inscriptions published by Edith Hall Dohan and R. G. Kent in *AJA*. xxx, pp. 249–258, especially 255, furnish the final date. The Greek alphabet first appeared in Cyprus in the fourth century B.C., and became increasingly common from the third century on.

[2] Sittig, *Zeitschr. f. vergl. Sprachf.* lii, pp. 194–202; Friedrich, *Kleinas. Sprachdenkmäler* 1932, pp. 49 f. An objective linguistic comparison of these inscriptions from Amathus with those of the Cypro-Minoan script is not yet possible. The use in the Amathus inscriptions of ϝ, *y*, and *z* (?) speaks against linguistic identity.

[3] *Cretan Pictographs and Prae-Phoenician Script* 1895, pp. 79–80, 83–85.

[4] *Proc. Soc. Bibl. Arch.* 27, p. 254.

[5] *Scripta Minoa* i, pp. 68–77.

[6] *JdI.* xxx, p. 57 f.

three of the fifty-six signs of the Classical Cypriote script with possible Minoan antecedents; Persson,[7] in 1930, claimed Minoan connections for forty-four of the Cypriote signs. Most recently Ventris[8] identified sixteen Classical Cypriote signs with supposed prototypes in the Minoan linear script B, and found less objective reasons for attributing sound values to seven other Minoan signs.

The Cypro-Minoan script played little part in these equations. Sundwall left it out entirely; Persson listed only six Cypro-Minoan characters, in the same column with the Minoan; Ventris omitted it because, if I understand him rightly,[9] he regards the Cypro-Minoan script and language as identical with the Minoan. The omission of this script was due primarily to the scarcity of easily available material. As recently as 1935, Evans' list of Cypro-Minoan signs in volume iv:ii of *PM.*, p. 762, fig. 744, contained only sixteen signs.[10]

The risk involved in the chronological and geographical leap from the Minoan to the Classical Cypriote script did not long go unnoticed. In 1937 Persson[11] and Casson[12] published new lists of Cypro-Minoan signs, drawing on material from recent excavations and on an almost unobtainable publication by Markides, which had passed unobserved until then.[13] The collation of these two lists gives ninety inscribed objects of the Late Bronze Age in Cyprus, with a total of sixty-one distinct signs. To these one may now add two *dipinti* in the Metropolitan Museum,[14] one unpublished inscription in the British Museum, three in the Cyprus Museum, three inscribed cylinder seals, and eighty-six new inscriptions which were discovered at Kourion by the Cyprus expedition of the University Museum of the University of Pennsylvania, and which are published below in Appendix I. These give the respectable total of one hundred and eighty-five inscriptions, and one hundred and ten signs.

There are two main schools of thought concerning the date at which the Cypro-Minoan script was introduced in Cyprus, and the source whence it came. Evans, and more recently Dikaios, have argued that writing of Minoan type was used in Cyprus in the Early Bronze Age. Evans[15] bases his argument on the belief that the Aghia Paraskevi cemetery, where Sayce's cylinder[16] was found, belongs exclusively to the "Copper Age." The necropolis, however, contains many tombs of the Late Bronze Age,[17] and the seal belongs stylistically to this period. Dikaios sees evidence for the early use of writing in a vase handle of the Early Cypriote III period, which he discovered at Vounous and published in *Iraq* vii, pl. X, fig. 20. The outer face of this was encircled before baking with a row of incisions which Dikaios regards as script, with later Cypriote parallels. Mr. Dikaios kindly showed me the handle in

[7] Schrift und Sprache in Alt-Kreta. *Uppsala Universitets Årsskrift* 1930, Program 3, p. 17, fig. 6.

[8] *AJA*. xliv, 1940, p. 510.

[9] *AJA*. xliv, p. 505, n. 32.

[10] Listed as fifteen, with one more which is not numbered. The signs given as variants of nos. 2 and 11 are separate characters. The Tekke ring is probably not of the Bronze Age, so the signs known only on it drop out, leaving a total of sixteen.

[11] More Cypro-Minoan Inscriptions, in *The Swedish Cyprus Expedition* iii, pp. 601–618, Appendix I.

[12] *Ancient Cyprus*, pp. 98–107.

[13] *Cyprus, Annual Report of the Curator of Antiquities, 1916*, pp. 16 ff. I have not seen this rare publication, but have studied most of the original inscriptions, in the Cyprus Museum.

[14] Casson, *Iraq* vi, p. 40, nos. 1–2.

[15] *PM*. iv: ii, p. 763.

[16] S2 in my list, p. 268.

[17] Gjerstad, *Studies on Prehistoric Cyprus*, p. 4.

the Cyprus Museum, but I must admit my inability to see writing on it. The incisions form an irregular running zigzag, and seem to be purely decorative. More significant is a series of potters' marks on vases of the Early Cypriote III period, found at Lapithos by the University Museum's expedition, and published by Miss Grace.[18] These marks, consisting of vertical and horizontal strokes and crescents, are identical with numerals of the Minoan hieroglyphic system, and perhaps show some knowledge of Minoan writing in Cyprus at the end of the Early Bronze Age. They do not, however, prove that the full hieroglyphic script was used on the island. Whether or not the incisions on Dikaios' handle are script, they certainly do not contain signs of the Minoan hieroglyphic system. The evidence for the early use of writing in Cyprus is thus extremely nebulous.

Casson and Persson reject the theory of the early introduction of the script, but believe that it was brought from the Greek mainland during the third Late Helladic period. Casson [19] ascribes the introduction of the script to Achaean colonists who settled in Cyprus at the end of the fifteenth or the beginning of the fourteenth century B.C. Persson [20] attributes it to a later migration, which he places about 1225 B.C.

It is now possible to study the history of the script in terms of the well stratified site of Kourion.[21] A brief summary of the new evidence is presented in Appendix I. The script first appears at Kourion in the L.C. IA:2 period, and remains in use through the L.C. IIIA period, that is to say, from about 1500 to about 1150 B.C. Its appearance anticipates by a century the period of close contact with Mycenae, so it cannot have been introduced by Achaean colonists. The evidence of the stratification is corroborated by that of the Cypro-Minoan characters themselves. These derive directly from the Minoan linear script A, and show no sign of Helladic influence.

Greek tradition tells of a large-scale migration of Achaeans to Cyprus following the Trojan war. This migration, for which the Dorian invasion was probably responsible, is reflected in the Submycenaean pottery and other cultural innovations of the L.C. IIIB period. It is to these newcomers that Persson appears to attribute the introduction of the Cypro-Minoan script. The Kourion excavations, however,

[18] *AJA.* xliv, pp. 40–43. [19] *Ancient Cyprus*, pp. 59 f., 89 f. [20] *Schrift u. Sprache*, p. 13.

[21] The excavations at Kourion are conducted by the Cyprus expedition of the University Museum of the University of Pennsylvania, under the direction of Dr. B. H. Hill. Work on the Bamboula site, the source of the material discussed in this paper, was supervised by the writer. I am deeply obliged to Dr. Hill and to my colleagues, Mr. George H. McFadden and Miss Virginia Grace, for assistance at many stages of the work. Mr. and Mrs. John Young helped with the cataloguing, and made the squeezes from which my drawings are prepared. Mr. A. H. S. Megaw, director of the Department of Antiquities in Cyprus, has done much to make my work in Cyprus successful and pleasant. Professor Mary H. Swindler helped in the preparation of this paper, and made a number of important suggestions. Professor H. Lamar Crosby, Dr. Eugene Schweigert, and Professor E. A. Speiser of the University of Pennsylvania have read the manuscript and helped me on numerous points. I bear a debt of gratitude to the directors and staff of several museums. At the risk of slighting others, I wish to express special thanks to Mr. P. Dikaios and Miss Joan du Platt Taylor of the Cyprus Museum, Sir John Forsdyke and Mr. Martin Robertson of the British Museum, and Miss Gisela Richter of the Metropolitan Museum. Mr. Morgan Marshall has granted me permission to publish a cast in the Walters Art Gallery. This publication would not have been possible without the generous support of the University Museum, in the field and during the preparation of the manuscript in America.

show that the script, far from being introduced by this migration, suddenly dropped out of use at this very time. Many inscribed vases were found on the last floors of the L.C. IIIA period, but not a single written record [22] is dateable to the four and a half centuries which elapsed between the end of the L.C. IIIA period and the intensifying of Oriental influence about 700 B.C., when the Cypriote syllabary re-emerged, together with the Phoenician alphabet. How the syllabary survived during the interim is a major problem of Cypriote archaeology.

It has been the custom to term "Cypro-Minoan" every inscription found in Cyprus in a Late Bronze Age context, even when the object inscribed was probably imported from abroad. Noting that certain signs occur only on objects which were perhaps imported, I have classified the inscriptions according to the wares on which they occur. This classification is scrupulously observed throughout the discussion and in the sign lists in the Appendices. Class I, the Cypro-Minoan script proper, comprises only signs found on objects of indubitably Cypriote manufacture. Class II contains signs inscribed on Mycenaean [23] vases of the usual fine ware; Class III, characters painted on similar vases. The inscriptions of Class IV are incised on large false-necked jars of coarse-tempered fabric. The inscriptions of Class V were impressed before baking on elongated bottles and pilgrim flasks of a red burnished wheel-made ware which was almost certainly imported. Class VI comprises a heterogeneous group of inscribed cylinder seals. A complete list of all examples of all signs is given in Appendix II.

Class I

The Cypro-Minoan Script

One hundred and one inscriptions of the certainly Cypro-Minoan Class I are known. These consist of seventy examples from Kourion,[24] K. 1–70; Markides' nos. 1–11;[25] the five Enkomi balls, PE. a–e = Persson's I:18–22; an unpublished ingot and sherd in the Cyprus Museum; and, listed by Casson, a bronze plaque in private possession in England, the ingot, *Exc.Cyp.*, p. 15, no. 1535, and the following unpublished pieces in the Cyprus Museum: 1492, 1493, 1501, 1502, 1505, and 1503.

These inscriptions contain seventy-three different signs, of which ten are numerals. The inscriptions are all extremely brief. PE. a contains eight characters; PE. e contains seven (two signs illegible); PE. c and M. 9 and 11 contain six characters each; PE. b, M. 1 (one a numeral), and P.I. 21 contain four; PE. d, M. 2, P.I. 20, K. 1, 2, and Casson: plaque, have three characters; M. 10, P.I. 22, K. 3–11, Cyprus

[22] See Appendix I. The three inscribed sherds from the L.C. IIIB level E in Area A are strays of earlier date, and do not prove that there was writing in the L.C. IIIB period. K. 22 is on L.C. II ware, K. 41 on a sherd transitional from L.C. II to L.C. IIIA. K. 6 is an exact counterpart of K. 3–5, which come from L.C. IIIA floor deposits. Not a single one of the many complete vases from the L.C. IIIB levels was inscribed.

[23] I use the term "Mycenaean" rather than the more specific "L.H. III" so as not to beg the question of origin. I shun Sjöqvist's "Levanto-Helladic" because of its omnibus use. All belong to the period of the L.H. III pottery of Greece. Many reasons have been advanced for considering this ware Cypriote. None is entirely satisfactory. The most convincing, superficially, begs the question. It is discussed below under Class III.

[24] See Appendix I.

[25] For the abbreviations used and the bibliography of these inscriptions, see Appendix II.

Museum ingot and sherd no. 1502 contain two signs each. The remaining inscriptions consist of single signs, mostly inscribed on the handles of vases.

Since the study of the script is concerned primarily with characters which possessed fixed syllabic values, it is essential to distinguish such signs from those which were only potters' marks or monograms. The surest criterion for identifying signs with syllabic values is their occurrence together in polysyllabic inscriptions. Failing this, if a Cypro-Minoan sign is identical with a character used syllabically in the Minoan or the Classical Cypriote script, or in both, that sign probably had an accepted sound value in the Cypro-Minoan script. A secondary criterion is the frequency with which a sign occurs. The more it was used, the greater the probability that it was in general currency.

All the signs of Class I except I: 1b, 4b, 5, 6b, 7, 12a, 12c, 15, 16, 22, 23, 24, 25, 27, 28, 36b, 36f, 42, 53, 54, 55, 58, 60, and 63,[26] occur in combination with others, and presumably belong to the script proper. Of the exceptions, I:1b, 4b, 12a, 12c, 36b, and 36f are graphic variants of signs which occur in combination with others. Minoan parallels will be shown below for I:15 16, 25, 27, 28, 42, 55, and 58, and Classical Cypriote parallels for I:5, 53, 54, 55, and 58. Only I:7, 22, 23, 24, 60, and 63 remain unaccompanied and unparalleled. Of these, I:7 might be equivalent to I:8, or even a careless version of I:6a, but is probably a separate sign. Sign I:60 suggests the star of the Minoan hieroglyphic script, but the stylization is different and it is unlikely that the two are related. These six signs were probably potters' marks or monograms, or perhaps purely decorative. None occurs more than once. They are omitted from the following discussion of the script proper.

Attempts to trace the history of the individual signs must be limited to the shapes, since it is not yet possible to check one's identifications in the light of linguistically certain texts. It has been the custom in certain quarters to assume that many signs underwent a profound change between the Minoan linear scripts and the Cypriote syllabary, turning upside down, round about, or inside out, losing many of their characteristic features, and acquiring others. Our increased *Corpus* of Cypro-Minoan signs shows that the characters underwent less change than is sometimes supposed, and that the changes which took place followed certain set principles.

The differences between the Minoan and Cypro-Minoan signs are due primarily to the materials and techniques used. The Minoan tablets were incised with a sharp tool in wet clay, a facile medium which led to a fluent and often florid style. The Cypro-Minoan inscriptions fall into two main technical groups. The Enkomi balls resemble the Minoan tablets in that they were inscribed in damp clay, but differ from them in being impressed with a dull tool rather than incised with a sharp one. This technique led to a graphic style which favored short strokes and the elimination of curved lines. Most of the other Cypro-Minoan inscriptions were deeply incised with a knife, or similar tool, in relatively hard materials, chiefly pottery. These, even more than the clay balls, called for a bold style and the avoidance of curves. The difference between the Minoan signs and their Cypro-Minoan descendants can usually be explained by this tendency to simplify. Thus the Cypro-Minoan script

[26] The numbers are those of the list of signs in Appendix II.

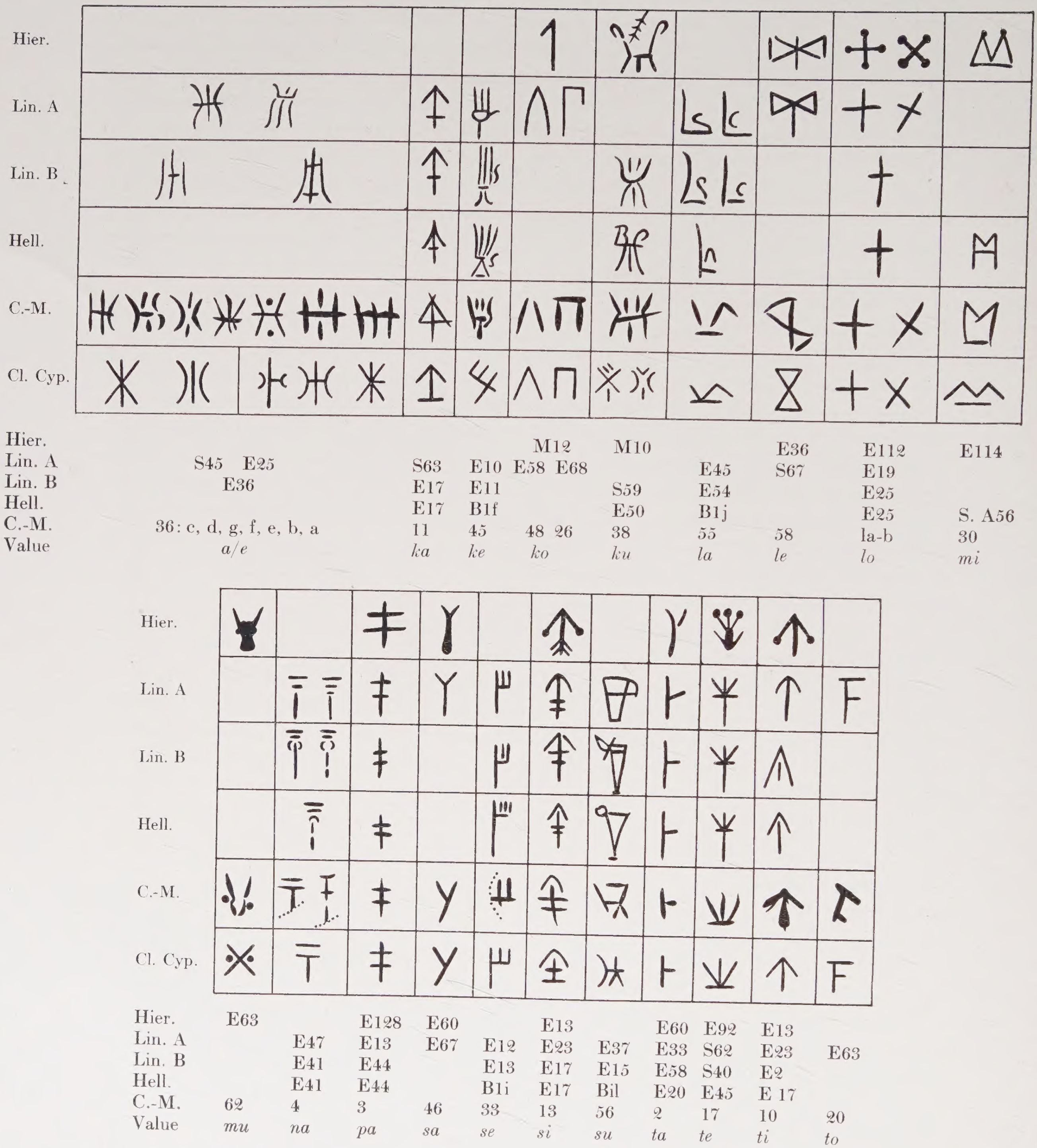


Fig. 1.—Cypro-Minoan Characters with Minoan and Classical Cypriote Parallels

linearizes the Minoan character for *la* (fig. 1).[27] The sign for *te* loses its tail. Groping attempts to render complicated Minoan signs are seen in the various Cypro-Minoan forms of the sign for *a*. This sign does not become standardized in Cyprus until the Classical period.

Thirty-six of the known Cypro-Minoan signs (figs. 1–2) derived from the Minoan; twenty of these (fig. 1) survived into the later Cypriote syllabary. Of the signs of Minoan origin, that for *to* (fig. 1) and nos. I:15, 19, 27, 35, and 42 (fig. 2) are paralleled only in Linear A; the signs for *ko*, *le*, *lo* (1b), and *sa* (fig. 1) and sign I:12 (fig. 2) in Linear A and the hieroglyphic script. The signs for *ke*, *na*, and *su* (fig. 1) and nos. I:14, 16, 28, 29, 37, and 61 (fig. 2) occur in both Linear A and B, but the Cypro-Minoan examples have characteristics which are paralleled only in Linear A. The character for *mu* (fig. 1) is at present paralleled only in the hieroglyphic script; future discoveries may reveal an immediate prototype for the Cypro-Minoan sign in Linear A. The signs for *ku* and *mi* (fig. 1) are not now known in Linear A. Both occur in the hieroglyphic and Helladic scripts, *ku* also in Linear B. Since both signs survived from the hieroglyphic to the Helladic script, they probably passed through the usual intermediate stages; future excavations may well reveal Linear A antecedents for these Cypro-Minoan signs. Thus all the Cypro-Minoan characters of Minoan derivation are paralleled in Linear A, or in signs which one may assume to have existed in Linear A. More than half of them could have come only from that script. The Cypro-Minoan script contains not a single sign which is specifically Helladic. This complements the stratigraphical evidence that the script was introduced to Cyprus prior to the period of intimate contact with mainland Greece, and leads to the conclusion that the Cypro-Minoan script derived directly from the Minoan linear script A.

In fig. 3 are shown eight Classical Cypriote characters which appear to have a good Minoan lineage, but for which a Cypro-Minoan stage is not demonstrable. Future excavations may reveal Cypro-Minoan examples of these signs. All but the characters for *po* and *ro* have antecedents in Linear A, some only there. Sundwall (*JdI*. xxx, pp. 49, 54) claims a Linear A prototype for the Linear B sign for *po;* the identification is not convincing, and the Linear A sign is, in any case, far from ours. See below, p. 261, for the signs for *me* and *ru*. Close as these Classical Cypriote signs are to the indicated Minoan characters, their equation will remain dubious until Cypro-Minoan examples are available. Two Classical Cypriote characters with Minoan

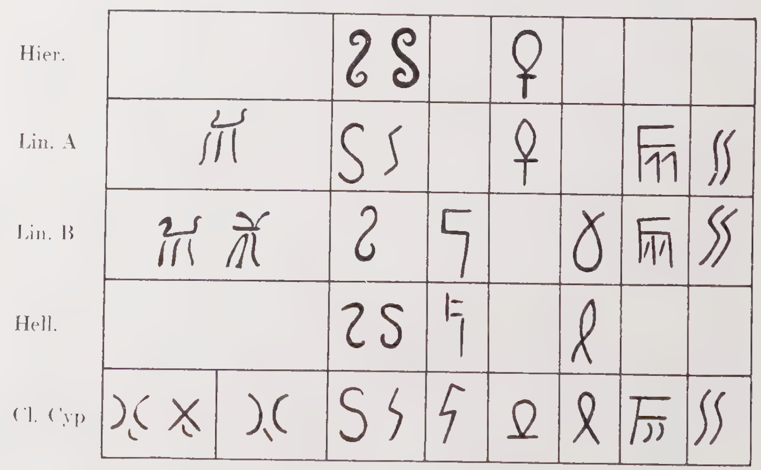
[27] An abbreviated bibliography of signs is appended under figs. 1–9. The following abbreviations are used:

Hieroglyphic script:	M.:	F. Chapouthier, *Les Écritures Minoennes au Palais de Mallia,* p. 31, fig. 12.
	E.:	Evans, *Scripta Minoa,* pp. 181–231, catalogue of hieroglyphic signs.
Linear A:	E.:	*PM*. iv: ii, p. 677, fig. 659.
	S.:	Sundwall, *JdI*. xxx, pp. 42–51.
Linear B:	E.:	*PM*. iv: ii, facing p. 684, fig. 666.
	S.:	Sundwall, *JdI*. xxx, pp. 51–55.
Helladic:	E.:	*PM*. iv: ii, p. 745, fig. 728.
	B.:	Blegen and Kourouniotis, *AJA*. 1939, pp. 557–576. B1–4 are the tablets in figs. 8–11. I have designated the lines in the tablets by letters of the alphabet, beginning at the top. Thus B. 1c is fig. 8, third line from the top.



Hier.	E128	E15	E103						E44	E45		E36				
Lin. A	E13	E73	E27	S57	S31	S26	E9	S5	E8	E7	E69	E29	E30	S71	E51	E46bs
Lin. B	E44		S9		S26		E26		E7	E6		E21	E8		E29	E55
Hell.	E44						E26		E7	E6		E21	E8		E29	B2b
C.-M.	6	12	14	15	16	19	25	27	28	29	35	37	41	42	44	61

FIG. 2.—CYPRO-MINOAN CHARACTERS WITH MINOAN PARALLELS



Hier.		E136		E39			
Lin. A	E25	S27		E36 bis		E35	E32
Lin. B	E50	E60	E38		E101	E62	E61
Hell.		E60	B1f		S. A68		
Value	*me/ru*	*pe*	*po*	*ra*	*ro*	*tu*	*zo*

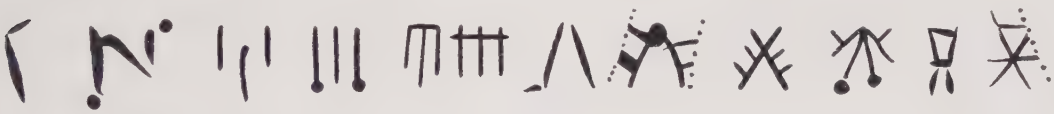
FIG. 3.—CLASSICAL CYPRIOTE CHARACTERS WITH MINOAN BUT NO

parallels, those for *pu* and *se* (fig. 9, p. 263), appear to enter the late syllabary through Class III rather than the Cypro-Minoan script proper.

The Cypro-Minoan numerals, I:64–73, are identical with those of the Minoan linear scripts. This numerical system continues to be used in the Classical Cypriote syllabary.[28]

There is as yet no certain evidence of the direction of the Cypro-Minoan script. It probably followed its prototype in running from left to right. The asymmetrical signs of the two scripts face in the same direction. The Classical Cypriote syllabary, perhaps under Phoenician influence, usually runs from right to left. Paphian inscriptions, however, are an exception to this, and writing from left to right is occasionally found in other parts of the island. The direction of the writing does not affect the orientation of the individual characters of the Classical syllabary. The retrograde forms of II:16b and V:6 may indicate that the scripts to which these signs belong run from right to left.

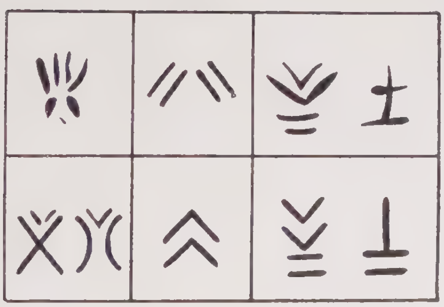
Ventris (*AJA*. xliv, 1940, p. 505, n. 32) seems to regard the Cypro-Minoan script and language as purely Minoan. The Cypro-Minoan script, however, contains fourteen signs (figs. 4–5) which have no Minoan counterparts. The origin of these non-



9 21 31 32 34 34 49 50 51 52 57 59

Fig. 4.—Characters Found Only in the Cypro-Minoan Script

C.-M.



Cl. Cyp.

C.-M. 40 53 54, 5
Value *ma* *re* *so*

Fig. 5.—Cypro-Minoan Characters with Classical Cypriote Parallels

Minoan signs is to be sought either in the fusion in Cyprus of two systems of writing, or else in the adaptation of the Minoan script to a non-Minoan language. The view that there was a long tradition of writing in Cyprus prior to the introduction of the Cypro-Minoan script has not been substantiated. Even assuming, for the sake of the argument, that the Vounous handle contains writing, it anticipates none of the non-Minoan signs of the Cypro-Minoan script, and is not to be regarded as an element in the formation of that script. The only non-Minoan script which was sufficiently common in Cyprus to be a candidate for the non-Minoan elements of the Cypro-Minoan script is cuneiform. There is, however, no recognizable cuneiform influence on the non-Minoan signs. These are close in style, if not detail, to the Minoan elements of the script. They were probably invented for the Cypro-Minoan script, to indicate sounds for which characters did not exist in the Minoan script. If this is correct, and the language

[28] Myres, *Cat. Cesnola Coll.*, p. 534 f., no. 1868.

of the Cypro-Minoan inscriptions contained sound combinations not used in the Minoan language, we are forced to the conclusion that the early Cypriote language was not identical with the Minoan.

Greek was probably spoken in Cyprus by a minority after the establishment of Achaean colonies there in the fourteenth century B.C.[29] It became the dominant language of large parts of the island as a result of the twelfth-century migration. Those inscriptions which antedate the Greek colonization, and probably many of later date, are in a language which is neither Greek nor Minoan. Both Persson [30] and I [31] have read certain Cypro-Minoan inscriptions as Greek. Such interpretations, even if intrinsically probable, should not be considered final until we know that equally good readings are not available in the non-Greek language of the island, or until an abundance of inscriptions removes the risk of coincidence.

The characters in fig. 5 make their first documented appearance in the Cypro-Minoan script. None of these can be traced directly to the Minoan or Helladic scripts, though a Minoan prototype may perhaps be inferred for I:5. All are retained in the Cypriote syllabary of the Classical period. These appear to represent combinations of sounds for which the Cypro-Minoan script did not inherit characters.[32] Though these signs were probably devised for the rendition of the native Cypriote language, one must not overlook the possibility that they were created for Greek, which used them in the Classical period.

The Classical Cypriote syllabary consists of fifty-six signs. Twenty-one of these (fig. 1) came from the Minoan linear script A, by way of the Cypro-Minoan. Eight more (fig. 3) have Minoan parallels, and are probably descended through the Cypro-Minoan script, though they are not yet known there. The signs for *ma*, *re*, and *so* (fig. 5) first appear in the Cypro-Minoan script, and enter the late syllabary from it. The signs for *i*, *yi*, *pu*, and one of those for *se* (fig. 9, p. 263) apparently derive from the script of Class III, found on Mycenaean pottery in Cyprus. This accounts for thirty-five of the fifty-six signs of the syllabary, and leaves twenty-one characters unexplained.

Several family groups are discernible among the Classical signs. Some of these can be traced to their Minoan origins, and cast interesting light on various problems of both script and language. Three such groups consist of pairs of signs for the syllables *sa* and *ta*, *se* (the form in fig. 9) and *te*, and *si* and *ti* (fig. 1). Each pair can be traced to variants of a single character in the Minoan hieroglyphic script. Thus the characters for *sa* and *ta* both derive from the cuttle-fish sign; *se* and *te* are both represented in the hieroglyphic script by a three-branched plant, the one plain, the other with leaves at the base of the stem. The signs for *si* and *ti* were originally arrows, with or without feathers on the shaft. The common origin of these signs is probably to be explained by the phonetic kinship of *s* and *t*. The fact that signs which represented phonetically related syllables in the late syllabary derive from

[29] For an unprejudiced discussion of this vexed problem, see Hill, *A History of Cyprus* i, pp. 83–94, especially 83–85.

[30] *Symbolae Philologicae O. A. Danielsson Octogenario Dicatae*, pp. 269–273.

[31] *AJA*. xliv, pp. 102–103.

[32] The sign for *so* is perhaps an exception to this. See p. 259.

common hieroglyphic ancestors furnishes the best possible proof that their sound values were preserved essentially intact from the Minoan hieroglyphic to the Classical Cypriote script.

One of the Cypro-Minoan signs for *so* (I:5, fig. 5) is the same as Evans' B59, but upside down. Ventris (*AJA*. 1940, p. 510) ascribes to Evans' B59 the value *to*. The Cypro-Minoan and Classical Cypriote character for *to* derives from a Linear A character, Evans' A63. This sign does not occur in Linear B, nor is B59 found in Linear A. The two characters differ from each other only in the position of the vertical line, which is at the side of the sign in Linear A, but at the center in Linear B. B59 is probably a symmetrical development of A63, with its sound value. It is difficult to avoid the conclusion that B59 is closely related to the Cypriote sign for *so;* in fact, the similarity of the two signs is in itself an argument for the accuracy of Ventris' identification. The only difficulty is chronological. The Cypro-Minoan script derives from Linear A. Evans' B59, however, is known only in Linear B and the Helladic script, of which the Cypro-Minoan is otherwise independent. Future discoveries may solve the problem.

I find no basis for a comparison of the proposed antecedents of the Classical Cypriote signs for *su* and *tu*. This casts suspicion upon the equations suggested. The lineage of the sign for *tu* (fig. 3) is probably correct, in spite of the lack of Cypro-Minoan examples. That of the character for *su* (fig. 1) is more vulnerable, and must therefore be considered uncertain.

The Greek language is poor in sibilants; it would not be surprising if the Minoan and pre-Greek Cypriote languages were more richly endowed. Although certainty is not now possible, several signs which perhaps represent a sibilant other than the Greek *sigma* are mentioned here for what they are worth. The Classical Cypriote syllabary possesses two signs for *se*. One (fig. 9) is rare in the Cypriote syllabary and unknown in the Cypro-Minoan script proper. It occurs, however, in Cyprus, painted on Mycenaean ware. This sign derives, as shown above, through Linear A, from a hieroglyphic character which is closely related to the ancestor of the late sign for *te*. The second and much the more common of the Classical signs for *se* (fig. 1) is apparently found in the Cypro-Minoan script, and occurs incised on L.H. III pottery in Cyprus. This sign has counterparts in the Helladic and both Minoan linear scripts; I am unable to trace it to the hieroglyphic script. It has no recognizable relation to the sign for *te*. The two signs for *se* are thus distinct in origin, and presumably possessed different sound values in Linear A. By the time of the Classical syllabary, however, the phonetic distinction appears to have been lost.

The identity of our sign I:6 (fig. 2) with the Phoenician *samek* is probably due to coincidence.

The sign for *so* cannot be traced, except by inference, beyond the Cypro-Minoan script, and then only to Linear B and the Helladic script. The Classical Cypriote sign for *zo* (fig. 3) has close parallels in Linear A and B, but none as yet in the Cypro-Minoan or Helladic script. The Classical Cypriote signs for other syllables beginning with *zeta* are creations of the Classical syllabary, and have no counterparts in the earlier scripts. Even the sign for *zo* is missing from the Cypro-Minoan script. This suggests the possibility that the Cypriote language did not possess the sound

represented by the Greek *zeta*. The similarity of the late sign for *zo* to the Minoan character may be due to coincidence, or it is just possible that the Classical sign was taken directly from the Minoan script with the value *zo*. It is more probable that the sign was used in the Cypro-Minoan script as well, but with a value other than that of the Greek *zeta*. If this contained a non-Greek sibilant, it would have been useless for the Greek of the late syllabary. When the script was adapted to the Greek language, this sign, no longer needed with its original value, may have been pressed into service for the Greek *zeta*.

Our sign I:12 (fig. 2) and Evans' A3 = B9 and B37 are close in shape to the Cypro-Minoan sign (fig. 1) to which the value *si* is attributed. Careless drawings of these signs are so similar to each other as to cause some confusion, but there is no doubt that they are four distinct characters. Ventris (*AJA*. 1940, pp. 510, 512) ascribes to Evans' B9 the value *ši*, on combined Cypriote and Etruscan evidence. Evans' sign, however, is probably not the ancestor of our sign for *si*, and there is no evidence in Cyprus for the *š*-sound. Ventris' demonstration by Etruscan analogies begs the question.

One of the most important family groups of Classical Cypriote characters is that which includes the signs for *a*, *e*, *ku* (fig. 1), *me*, *ru* (fig. 3), *ma* (fig. 5), *ϝa*, *xa*, *za*, *ze* (fig. 6), *i* and *yi* (fig. 9, p. 263). These signs share a basic structure consisting of an X or opposed arcs, and are differentiated from each other by various combinations of short vertical or diagonal lines above and below in the central axis. Two short lines in the same register may be replaced by a chevron. Some of these signs can be traced to the Cypro-Minoan and Minoan scripts.



Fig. 6.—Classical Cypriote Characters

The Minoan signs of this group were apparently distinct in origin, but became assimilated in shape to the sign for *a* at the time of the linear scripts. Here we find a basic structure consisting of S-shaped lines, tapering arcs, or superimposed concave and convex arcs. The two sides of the sign are always connected by a horizontal cross-bar. These curvilinear forms presented difficulties in the recalcitrant media of the Cypro-Minoan script, which led to various independent attempts at simplification. The Cypro-Minoan variations on the basic type include opposed arcs, opposed chevrons, superimposed concave and convex arcs, and parallel vertical lines. The connecting horizontal bar is missing from sign I:36g (fig. 1) and from the sign for *ma* (fig. 5). It was entirely abandoned in the Classical Cypriote syllabary.[33]

In the Minoan and Cypro-Minoan scripts there are fewer combinations of distinguishing marks than in the later syllabary. The use of these distinguishing marks, however, is absolutely consistent, which consistency shows that they were considered fundamental. Since this is the case, one may assume that these marks of differentiation furnish a reliable index to the Classical Cypriote connections of the Minoan and Cypro-Minoan signs. Both early scripts possess the types with single

[33] The horizontal bar on the sign for *e* was a special creation of the late syllabary, not a survival from the preceding scripts.

vertical lines above and below, and with two lines above and one below (fig. 1). The Minoan script has a sign with one line below and none above (fig. 3); the Cypro-Minoan, one with two lines above and none below (fig. 5). These markings are characteristic of the Classical Cypriote characters for *a/e*, *ku*, *me/ru*, and *ma*.

The Classical signs for *a* and *e* share the distinguishing marks of the Cypro-Minoan sign I:36 (fig. 1) and its Minoan antecedents. The Classical sign for *e* is distinguished from that for *a* by the addition of a horizontal bar, usually to the right of the median line. This has no counterpart in the Cypro-Minoan script, but is a late device to make one inherited character do duty for two distinct sounds. Linear B possesses a comparable bi-form of the sign for *a*, with two cross-bars instead of the original one. The differentiation is consistent, and indicates two distinct sound values.[34] Linear A and its derivative, the Cypro-Minoan script, have only the one original type.

The sign for *ma* was apparently invented for the Cypro-Minoan script. The vowel element may account for its adherence to the *a*-group, although a better, if more hypothetical, explanation may be found elsewhere. The Classical signs for *me* and *ru* preserve with slight variations the distinguishing marks of the Linear A sign, E. 25 (fig. 3).[35] If this sign existed in the Cypro-Minoan script with the value *me*, it might easily have attracted to this group the character for the phonetically related *ma*.

The sign for *i/yi* (fig. 9, p. 263) first appears on Mycenaean pottery in Cyprus, in our Classes II and III. It is not known in the Cypro-Minoan or Minoan scripts. It has been noted that signs of this group were rendered in the Classical syllabary by either an X or opposed arcs. In this case, the two types were separated, the X-form representing *i* exclusively, the arc type being restricted to use for *yi*.



FIG. 7.—CLASSICAL CYPRIOTE CHARACTERS

The sign for *ku* presents no difficulties, save for the fact that it is at present not known in Linear A, which is probably due to chance.

The remaining signs of this group, for *ϝa*, *xa*, *za*, and *ze* (fig. 6, p. 260) are without Cypro-Minoan or Minoan parallels,[36] and must be regarded as creations of the Classical Cypriote syllabary. Their inclusion in this group is probably due to their vowel elements. The character for *ze* presumably depends upon that for *za* rather than the vowel *e*.

These creations of the Classical Cypriote syllabary reflect the consonants and semi-vowels ϝ, *x*, and *z*. In fig. 7, I show the Classical signs for other syllables with these sounds and for *y*. Not one has demonstrable antecedents in the Cypro-Minoan script,

[34] The derived sign perhaps confirms Ventris' theory (*AJA*. 1940, p. 506) that Minoan final *-a* weakened to something like *-e*. The double-barred form may have been developed to consecrate the phonetic change. Once established in final position, the new sign would have been available for the rendition of the same sound in other positions.

[35] I cannot explain how one archetype could give rise to two signs with such divergent values. These may derive by the acrophonic process from two semantically similar but phonetically dissimilar words.

[36] Evans' rendition (*Scripta Minoa* i, p. 70, fig. 37) of one of the signs on an Enkomi ball as *ϝa* is inaccurate. Compare the photograph in Persson, *Symbolae* . . . , no. e.

or any but improbable ones in the Minoan.[37] Only one of the Classical signs for syllables containing any of these sounds may go back to a Minoan antecedent, that for *zo* (fig. 3, p. 256). We have seen that even this is not known in the Cypro-Minoan script, and that its Minoan origin is therefore uncertain. The Classical sign for *ye* is clearly a bi-form of that for *ya* (fig. 7), itself a Classical invention.

Even if we accept Sundwall's dubious Minoan equations, we still have no Cypro-Minoan counterparts for any of these signs. The lack of some characters in the Cypro-Minoan script might be due to chance, but the lack of all makes it extremely improbable that the language of the Cypro-Minoan inscriptions contained the sounds involved.

In fig. 8 I show the Classical Cypriote signs which have not yet been discussed. Persson and Sundwall claim Minoan descent for several of these, assuming that they underwent considerable alteration during the process of transmission. Since we do not possess Cypro-Minoan prototypes for any of these signs, and since the suggested Minoan equations are not particularly close, it seems preferable to postpone the question of their Minoan affinities.



FIG. 8.—CLASSICAL CYPRIOTE CHARACTERS

The sign for *o* occurs in two forms, neither of which resembles anything Minoan. Both forms of the character, however, are extremely close to the two forms of the Cypro-Minoan and Classical Cypriote sign for *so* (fig. 5, p. 257), so close that they almost certainly derive from them. That the sign for *o* derives from that for *so* rather than the reverse, is indicated by the dependence of one of the signs for *so* on another character which almost certainly possessed the value *to* (see above, p. 259). The sign for *so* makes its appearance at a relatively late date; that for *o* was probably a product of the Classical syllabary.

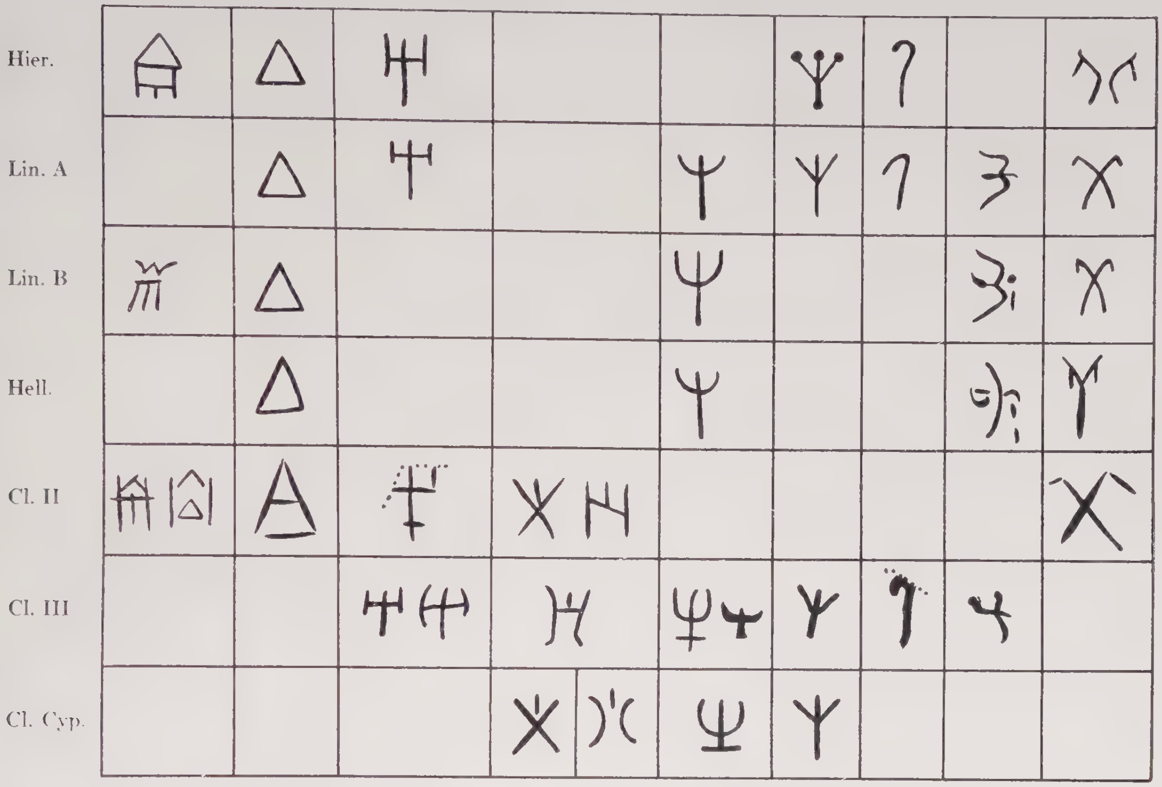
The history of the signs for unaccompanied vowels deserves further study. The characters for *e*, *o*, and *i* are not found in the Cypro-Minoan or Minoan script, but appear to have been creations of the late syllabary.[38] The sign for *u* (fig. 8) resembles the Helladic cousin of our II:20 (fig. 9). A generic connection, however, is unlikely, and the Classical sign is probably a Cypriote invention.

It may be that the sign for *a* originally represented a syllable containing a consonant or semi-vowel. I find eighteen examples of the character in the Linear B documents published in *PM.* iv:ii. Three are of the type with single cross-bar, fifteen of that with double cross-bar (see above, p. 261). The type with single cross-bar

[37] Sundwall's equation (*JdI*, xxx, p. 58) of the sign for *xe* with the Minoan antecedents of our I:28 (fig. 2) is highly improbable, as is that of the sign for *za* with his A54. His correlation of the sign for ϝ*e* with his A70 is possible, but, in view of the simplicity of the character, its rarity in Linear A (mostly in "ligatures" in masons' marks), and its absence from the Cypro-Minoan script, anything but certain.

[38] The sign for *i*/*yi* first appears in Classes II and III; it is not known which value it possessed there. The Linear B character, for which the value *e* was suggested is, as explained above, not the ancestor of the Classical sign for the same sound.

occurs once each in initial, medial, and final positions. That with double cross-bar is used twice initially, ten times medially, and three times finally. These sometimes follow characters to which I have ascribed sound values. The single-barred type, to which the value *a* was assigned, follows the signs for *ke* and *te*. The other character, to which the value *e* was tentatively ascribed, occurs twice after the sign for *ke*, and



Hier.	E43	E130	E133			E92	E32		E125
Lin. A		S77	S15		E22	E20	S74	E41	S52
Lin. B	S33	E100			E47			E32	S38
Hell.		E52			E47			B1c	B1g
Cl. II	19a, 19c	23	6	21					20
Cl. III			15	18	10	9	13	19	
Value				*i/yi*	*pu*	*se*			

Fig. 9.—Characters of Classes II and III Not Found in the Cypro-Minoan Script

once each after the signs for *pa* and *la*. The resultant vowel combinations, *-ea*, *-ae*, and *-ee*, while not impossible, are certainly striking. If the sign originally designated a syllable containing a consonant or semi-vowel, smoother readings would result. This assumption would agree with the evidence of the signs for *e*, *i*, *o*, and *u*, and place the invention of characters for unaccompanied vowels at the time of the formation of the Classical syllabary. It may be significant that this process was taking place in Greece at this very time.

The history of the script casts some light on the phonology of the pre-Greek language of Cyprus. The failure of the Classical syllabary to distinguish between

voiced, voiceless, and aspirated stops has already been mentioned. Ventris (*AJA*. 1940, pp. 503–504) notes this fact, and draws from it the conclusion that the prototype of the syllabary possessed only one of the three types of stops. Unfortunately, Ventris regards the Cypro-Minoan inscriptions and language as purely Minoan, and therefore attributes the single stop to Minoan. He then arbitrarily brands it voiceless, and concludes from this that the Minoan and Etruscan languages are closely related. The Classical Cypriote syllabary, however, got its signs not directly from the Minoan script, but by way of the Cypro-Minoan. We have, therefore, to reckon not only with Minoan characteristics, but above all with Cypro-Minoan transformations of the parent script to suit its own linguistic requirements. Minoan words which survived into Greek should have warned Ventris of his error. *Labyrinthos* contains both voiced and aspirated stops, *terebinthos* all three. It may be that the failure of the Classical syllabary to distinguish between the different types of stops has a purely orthographic explanation.[39] If, however, it reflects an earlier phonetic practice, it is that of the pre-Greek Cypriote language, and not the Minoan. Even if this shortcoming of the Classical Cypriote script reflects a phonetic peculiarity of the language of the Cypro-Minoan inscriptions, it does not mean that the Cypriote language had only one type each of labial, dental, and gutteral stop, but simply that it had only one of those used in Greek.

Other characteristics of the Cypriote language are the probable lack of the sounds ϝ, *x*, *y*, and *z* (p. 261 f.); the possible sharing with Minoan of a sibilant other than that rendered by the Greek *sigma* (p. 259 f.); the use of numerous Minoan sounds which did not last over into Greek, represented by the signs in fig. 2; the occurrence of certain combinations of sounds found in Greek, but apparently not in Minoan (fig. 5); and certain phonetic elements present in neither Greek nor Minoan (fig. 4). What this tells us about the Cypriote language is little enough. It may perhaps point the way to future work, and it at least clears up certain fundamental misapprehensions as to Minoan.

Class II

Thirty-one inscriptions are assigned to Class II. All are incised on Mycenaean[40] ware: seventeen on jars with three vertical handles, six on false-necked jars, three on kraters with horizontal handles, two on amphoroid kraters with vertical handles, two on jugs, and one on a one-handled cup. These contain twenty-five signs, of which II:24 and 25 are numerals, and II:23 is probably an indication of measure.[41] The relation of this class to the surely Cypro-Minoan Class I is determined by the following considerations.

The two scripts have eleven signs and two numerals in common. These are all of Minoan origin. This might indicate a close connection between Classes I and II if it were certain that Class II did not have independent contact with the Minoan script. Class II, however, contains four Minoan signs, II:6, 19, 20, and 23 (fig. 9) which are not known in the Cypro-Minoan script and have no demonstrable connection with characters of the Classical Cypriote syllabary. Class II probably got

[39] Professor E. A. Speiser calls my attention to the parallel furnished by Hurrian, which was at one time thought, for orthographic reasons, to possess only one series of stops.

[40] See note 23.

[41] Sundwall, *JdI*. xxx, p. 50.

these signs from Crete, independently of the Cypro-Minoan script. The non-Minoan signs of the two scripts prove that this is the case. Class I possesses eleven non-Minoan signs, and Class II has eight, II:7, 13, 14, 15, 17, 18, 21, and 22 (see App. II). If one of the two classes of script had acquired its Minoan signs from the other, it would doubtless have taken over some of the non-Minoan signs as well. There is, however, absolutely no correspondence between the non-Minoan signs of the two scripts. We can only conclude that Classes I and II are two totally distinct scripts. Both are dependent upon the Minoan, but they have no further connection. Obviously, Class II should not be called Cypro-Minoan.

Signs II:1, 6, and 10 occur in Crete only in the hieroglyphic and Linear A scripts; sign II:16 only in Linear A. Class II contains no specifically Linear B or Helladic signs. This indicates that it was an offshoot of Linear A, and a first cousin of the Cypro-Minoan script.

The relation of Class II to Class III will be discussed in more detail below. Class II shares with Class III two signs not found in the Cypro-Minoan Class I, II:6 (=III:15a), of Minoan origin, and II:21b (=III:18). See fig. 9. In II:21b (=III:18) the two scripts possess a common element independent of their Minoan heritage; this shows that they are more closely related to each other than to the Cypro-Minoan Class I. Sign II:21 (=III:18), as noted above, was adopted by the late Cypriote syllabary, where two bi-forms possessed the values *i* and *yi*. Sign II:19a occurs in Class VI, on the seal S.9, together with a sign which resembles III:11. This may constitute secondary evidence of the affinity of Class II to Class III.

Class III

Twenty-eight inscriptions of Class III are known from Cyprus. Eight are on false-necked jars, five on kraters with horizontal handles, one on a krater with vertical handles, one on an amphoroid krater with vertical handles, three on kraters of unspecified types, two on small jars with three horizontal handles, and one each on a jar with three vertical handles, a jug with round mouth, an angular jug with trefoil mouth, a "vase en forme de gourde plate," a two-handled bowl, and a bowl with unbridged spout. Two are on unspecified shapes. All but K76 are single signs painted on the bases of vases. The exception, K76, consists of two signs painted on the side of a shallow two-handled bowl (fig. 10). Class III contains nineteen separate signs.

Schaeffer[42] was the first to call special attention to this group of inscriptions. He stated that they were applied in red paint before baking, and were therefore certainly potters' marks. He then remarks: "La plupart de ces marques représentent des caractères empruntés à l'écriture égéo-chypriote," and concludes that the vases on which they are found were made in Cyprus. Schaeffer does not say specifically that the red paint of the *dipinti* is the same as that of the decoration of the vase, but his statement has been taken to mean that.[43]

In the cases which I have checked, the paint of the *dipinti* is definitely not the same as that of the decoration. It is a matt red paint which was applied after the decoration had dried, possibly after baking. This is clear in fig. 10. The Kourion vase is decorated in lustrous lavender-grey paint, but the *dipinto* is in matt vermilion.

[42] *Missions en Chypre*, pp. 76–79, 119–121.

[43] Casson, *Ancient Cyprus*, p. 77.

The decoration has largely flaked off, carrying away all parts of the *dipinto* which lay over it. Where the *dipinto* lay on the undecorated clay, its thin firm paint is preserved. The two types of paint did not blend, and the line of demarcation between them is clear. There is no doubt that two types of paint were employed, and that the *dipinto* is subsequent to the decoration of the vase. Only a chemical analysis will show whether the *dipinti* were fired. Until this is done, it is unsafe to assert that these are potters' marks; they may be the monograms of dealers.

The assumption that these *dipinti* are in the Cypro-Minoan script must now be examined. The affinities of the script of Class III are difficult to establish, since

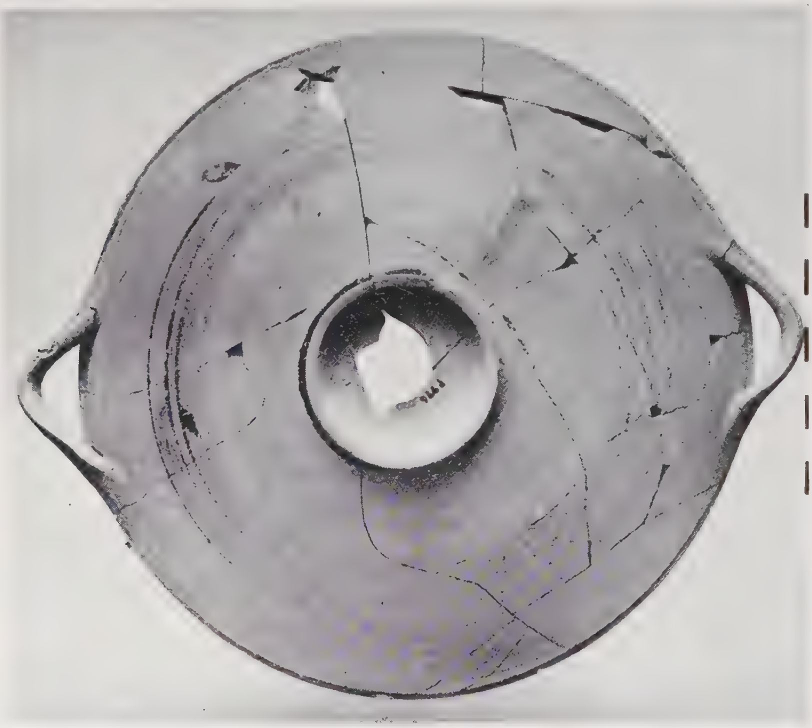


Fig. 10.—Mycenaean Plate with Dipinto, K. 76

most of the signs are monograms, whether of potters or dealers, and do not necessarily form part of an established system of syllabic writing. In spite of these difficulties, the signs furnish decisive evidence.

Thirteen of the nineteen characters of Class III are unknown in the Cypro-Minoan Class I. The six signs, III:1, 2, 4, 5, 6, 8, which do occur in Class I are all of Minoan origin, and thus do not necessarily indicate direct connection between Classes I and III. More significant is the fact that Class III contains five Minoan signs, III:9, 10, 13, 15, and 19, which are not found in Class I. The decisive factor here, as in the case of Class II, is the utter lack of correspondence between the non-Minoan signs of Class III and the Cypro-Minoan Class I. This shows that the *dipinti* are not in the Cypro-Minoan script. What little the two scripts share is due to common descent from the Minoan script.

All the Minoan signs of Class III occur in Linear A, signs III:1b, 6, 8, 9, 13, and 15

only in Linear A and the hieroglyphic script. The Minoan elements of Class III thus depend on Linear A.

Three of the signs of Class III appear in the Classical Cypriote syllabary, although they are not found in the Cypro-Minoan script (fig. 9). Sign III:18 (=II:21) has already been discussed. III:9 is occasionally used in the late syllabary with the value *se*. III:10 is probably the same as the late character for *pu*. These two signs are of Minoan origin, so future discoveries may reveal another source for their entry into the late syllabary.

Eight signs, III:3, 7, 11, 12, 14, 16, 17, and 18, are of non-Minoan origin. These have some points in common with signs of Class II. Sign III:18, as noted above, is identical with II:21b. Sign III:11 is so close to VI:14 and 15 that the three may belong to one family group. We have already noted the fact that VI:14 occurs together with VI:11, which is identical with II:19a. Classes II and III and the seals S8 and 9 thus possess ties which they do not share with the truly Cypro-Minoan Class I. This suggests that they have a common ancestor other than the Minoan script. Our evidence does not warrant the complete identification of Classes II and III. The divergent characters for *se* (II:8 and III:9) militate against it.



Fig. 11.—Inscribed False-necked Jar of Class IV, K. 82

Class IV

Class IV comprises six inscribed vases and six different signs. These were incised after baking on the handles or *disci* of large false-necked jars, such as *Cat.Br.Mus.* 1:2, C501. There has been some discussion of the place of origin of these vases, which are surely not Cypriote. Forsdyke's view[44] that they are Late Minoan III is perhaps confirmed by several pieces at Kourion which have a depressed *discus* (fig. 11). This appears to be a Minoan rather than a Helladic characteristic. On the other hand, as Professor Blegen kindly pointed out to me, the Kourion vases are technically remarkably close to a group of vases of the same shape, but of somewhat earlier style, found in Troy VI,[45] and may come from the same manufacturing center. The vases found in Cyprus appear to be of the fourteenth century.

Characters IV:1–5 all occur in Crete. IV:5 is found only in Linear A, which also has the closest parallels for IV:4. Signs IV:1–3 occur in all the Minoan scripts and

[44] *JHS.* xxxi, pp. 113–115.

[45] *AJA.* 1939, p. 226, fig. 29.

the Helladic as well. In contrast to the above, the fragmentary sign IV:6 is identical so far as preserved with a sign which is known only on the Greek mainland.[46] I know of no other character, Minoan, Helladic, or Eastern, with which it may be compared. It is at present impossible to reconcile the conflicting evidence of the several signs, and localize the script to which the inscriptions of Class IV belong. The absence of signs characteristic of the Cypro-Minoan script or of Classes II and III is significant. Present evidence indicates that these vases were inscribed in a region where the Greek tradition was remarkably free of foreign influence.

Class V

Class V consists of nine inscriptions and nine characters, of which V:8–9 are numerals.[47] All except V:7 and perhaps 6 have Minoan antecedents; all but 6 are paralleled in the Cypro-Minoan script. Sign V:6 is similar to II:16b. It appears to be a retrograde version of I:20, etc., of Minoan origin. V:7 may be a carelessly drawn numeral, or perhaps it is the same sign as I:9. It is not clear which end should be up. Only two signs, V:5 and 6, occur in Class II, only V:1 in Class III.

The practical identity of these signs with those of the Cypro-Minoan script is strange, in view of the probability that this pottery was not made in Cyprus. The ware has been discussed by Sjöqvist.[48] The signs were incised before the vases were fired, so there is no possibility that the inscriptions were made after the vases were shipped to Cyprus. The question is complicated by the fact that these are probably all potters' marks, either monograms, or the numbers of batches of pottery. The signs are very simple, so it may conceivably be a coincidence that they agree so remarkably with the Cypro-Minoan characters.

Class VI (fig. 12)

The inaccuracy which characterizes the reproductions of the Bronze Age inscriptions of Cyprus reaches its climax with the cylinder seals. For the sake of a fresh start all known examples are republished here, and the authority for the reproduction is mentioned. All but 4, 5, 9, and 10 are from photographs.

S1. Myres, *Cat.Cesnola Coll.*, p. 435, no. 4311.

S2. Sayce, *Proc.Soc.Bibl.Arch.* 27, 1905, p. 254, no. 11, with a photograph. Accurately drawn in Ward, *The Seal Cylinders of Western Asia*, p. 345, no. 1165. Other publications inaccurate.

S3. *Swedish Cyprus Expedition* i, pl. LXXVI, Enkomi, Tomb 2, no. 68. The first is perhaps not a graphic sign.

S4. Dussaud, *Civ.Préh.*[2], p. 429, fig. 319. Dussaud is probably wrong in interpreting a number of naturalistic designs as part of the inscription.

S5. A.P. di Cesnola, *Salaminia*, p. 120, fig. 128.

S6. C. Gordon, *Iraq* vi, pl. VIII, 67. Provenience unknown. Included in this list because of Cypro-Minoan parallels to some of the signs.

S7. Murray, etc., *Excavations in Cyprus*, pl. IV: 744.

S8. *Swedish Cyprus Expedition* ii, pl. CLXXXVI, 21.

[46] 'Εφ. 1895, pl. 11: 4–5.

[47] Casson's 31c (CC381) is not an inscription, but a selection from the modern scratches on a red slipped vase of Archaic date.

[48] *Problems of the Late Cypriote Bronze Age*, pp. 51–54, 211.

S9. Dussaud, *l.c.*, p. 431, fig. 320.

S10. Ward, *l.c.*, p. 353, no. 1212. This seal, from the collection of the Duc de Luynes, is generally regarded, without proof, as Cypriote. It is included here only in order to explode that theory.

The inscribed cylinder seals may come from several manufacturing centers, although all but S6 and 10 were found in Cyprus. Lacking a detailed stylistic study which would make it possible to distinguish Cypriote from imported seals, we can only treat the inscriptions individually, and try to place each on the basis of the script.

S1 consists of five signs, all of which are known in the Cypro-Minoan Class I. VI:5b is the only sign in this inscription which occurs in any of the other scripts found in Cyprus. All but VI:10 are of Minoan derivation. The non-Minoan VI:10 is



Fig. 12.—Inscriptions on Cylinder Seals

shared only with the Cypro-Minoan Class I, and shows that S1 is in the Cypro-Minoan script proper.

The first three signs of S2 occur in the Cypro-Minoan script and in Class II. The fourth sign, VI:21, is damaged, but is perhaps a variant of I:28. If so, all the signs are of Minoan origin. The final attribution of this inscription must await the exact identification of VI:21. The present evidence does not contradict a tentative attribution to the Cypro-Minoan script.

S3 consists of four signs. The first, VI:18, is probably an emblem, rather than part of the inscription. The other signs occur in Class I; sign VI:4a only there. This inscription, too, appears to be Cypro-Minoan.

The single sign on S4 occurs in both Classes I and IV and in their Minoan predecessors. It is also found on S10. The attribution of the seal to the Cypro-Minoan script is epigraphically possible, but not certain.

Both of the signs in S5 are common in the Cypro-Minoan script; the lower occurs only in that one of the Eastern scripts discussed here. These justify the attribution of the seal to the Cypro-Minoan script.

S6 is the inscription on a cast in the Walters Art Gallery. There is no record of the provenience or present whereabouts of the seal. The inscription is listed here because of the Cypro-Minoan parallels to signs VI:4b, 6, and 17. These are all of Minoan origin; their curvilinear forms perhaps indicate direct Minoan influence. The inscription probably belongs to none of the classes of writing identified in this paper, but to still another Minoanizing Near Eastern script.

The attribution of S7 is uncertain. Sign VI:4a is paralleled only in Class I; VI:5a in Classes I and II. VI:25 may be the same as I:42. Sign VI:26, however, has no counterpart in any of the scripts discussed. It is not a careless version of the *libra*, for that appears elsewhere on the seal in the usual stylization. It is not yet possible to assign this seal to any known script, though it belongs to the Minoanizing group.

S8 and 9 have been mentioned in connection with Classes II and III. Sign VI:11, identical with II:19a, is of Minoan origin. VI:13 perhaps derives from one of the Minoan prototypes of the Classical sign for *a* (fig. 1), though it has no exact counterpart in the Cypro-Minoan or Minoan linear scripts. Signs VI:14 and 15 have a family resemblance to III:11, and perhaps reflect the same influences. The exact relationship of Classes II and III and S8 and 9 is not clear. It may be that the seals represent the parent script on which Classes II and III drew; it may equally well be that one of these is the parent; or all may depend upon a fourth script. Future expansion of the material may show that less than three systems of writing are involved.

S10 is from the collection of the Duc de Luynes, and is, therefore, usually considered Cypriote, although there is no evidence that it was discovered on the island. Sign VI:8 has parallels in the Minoan scripts, and in Classes I and IV. The other signs, however, have nothing in common with any of the scripts discussed in this paper. Ward[49] suggests that the inscription is perhaps in an early form of Sabaean. Whatever it may be, it is certainly not Cypro-Minoan.

Appendix I

New Inscriptions from the Bamboula Site, Kourion

A provisional report was published in 1938, following the first season of excavations of Bamboula.[50] Accounts of subsequent seasons have appeared in the *Bulletin* of the University Museum.[51] Three identical inscriptions were discussed in *AJA*. xliii, 1939, pp. 102–103.

Five main sections have been cleared in the settlement, and thirty-seven tombs have been excavated. Pending the final publication, the following summary must suffice to establish the context of the inscriptions. The main strata of the site are here listed by periods, followed by a note on the archaeological characteristics of each, and a tentative date. The dates are those of Sjöqvist, *Problems of the Late*

[49] *The Seal Cylinders of Western Asia*, p. 353.
[50] *AJA*. 1938, pp. 261–275.
[51] Vol. 7, no. 3, pp. 14–21; vol. 8, no. 1, pp. 2–14.

Cypriote Bronze Age, except as noted. The catalogue numbers of the inscriptions are listed after the levels in which they were found, preceded by a K. for Kourion, and followed in parentheses by the exact designation of their position in the level. The lower the sub-number, the lower the position.

L.C. IA:1. White Slip I and Base Ring I wares of primitive types; Wash ware.[52] The pottery of this level is stylistically earlier than, and is stratified below, the developed types assigned by Sjöqvist to the L.C. IA period. The dates 1550–1525 B.C. seem to be indicated.
Area C, Level A. No inscriptions.

L.C. IA:2. White Slip I and Base Ring I wares of the usual developed types; Wash ware; imported wheel-made red burnished and painted wares. Ca. 1525–1450 B.C.
Area A, Level A:1.
Area C, Level B:1–3.
Area E, House I, Level A:1–4.
Tomb 12, Burial periods A:1–3, B. K. 21, 85 (B).

L.C. IB. White Slip and Base Ring I and II wares in proportions of two to one; Wash ware; imported wheel-made red burnished and painted wares; one L.H. II sherd in Area C. Ca. 1450–1400 B.C.
Area C, Level C:1. K. 12, 13, 18, 49, 54.
Tomb 12, Burial period C.

L.C. IIA. Small quantities of White Slip I and Base Ring I wares; much White Slip II and Base Ring II wares; Wash ware; imported wheel-made red burnished ware; L.H. IIIA: 1–2. Ca. 1400–1350 B.C.
Area A, Level A:2–6. K. 83 (A:3).
Area C, Levels C:2, D:1. K. 17 (C:2).
Area E, House I, Level B:1–3.
Tomb 2, Burial period A. K. 45.
Tomb 12, Burial period D.
Tomb 26. K. 84.

L.C. IIB. White Slip II, Base Ring II; diminishing quantities of Wash ware; L.H. IIIA:3–B:1. Ca. 1350–1275 B.C.
Area A, Levels B:1–5, C:1–3. K. 19(B:4), K. 33(B:5).
Area C, Level D:2. K. 34.
Area E, House II, Levels 1–3.
Tomb 3, Burial period A.
Tomb 6. K. 74, 76.
Tomb 12, Burial period E.
Tomb 19, Burial period A. K. 11.
Tomb 28. K. 60.

L.C. IIC. Late Base Ring II ware; very little White Slip II; L.H. IIIB: 2–3; appearance of Bucchero and painted wares characteristic of the following period. Ca. 1275–1225 B.C.[53]
Area C, Level E:1. K. 71.

[52] "Wash ware" is my name for what Sjöqvist (*Problems*, pp. 61 f.) calls Red and Black Slip Wheel-made wares. The two wares are admittedly one, with color variations due to varying firing conditions; the ware is not slipped, but covered with a wash of paint applied with a brush; it is not always made on the wheel. The Swedish expedition has a confusing number of "Black Slip" wares.

[53] Sjöqvist (*Problems*, p. 195) dates the latest L.C. IIC finds at Enkomi about 1230 B.C., but allows for a gap in the evidence, and closes the period at 1200 B.C. Many of the so-called Levanto-Helladic vases from the Enkomi tombs 6, 10, 18, and 19 belong with the Cypriote painted wares of the following L.C. IIIA period, rather than with the Helladic pottery of the preceding stage. These vases show that the tombs in question are truly transitional between the L.C. II and L.C. III periods. There is no evidence of a chronological gap between these and the earliest deposits of the succeeding period. It seems advisable to place these tombs at the end of the L.C. IIC period, and term later deposits L.C. IIIA. The question is one of terminology rather than of the dating of specific pieces.

Area E, House II, Levels 4–5.
House III, Level 1:a–c.
Tomb 19, Burial period B.

L.C. IIIA. Painted wares of band, panel, and crude figure styles; hand- and wheel-made Bucchero ware; wheel-made imitations of Base Ring and Shaved wares; local and imported pilgrim flasks; milk bottles. Plain ware made on fast wheel. Beginnings of iron. Ca. 1225–1150 B.C.[54]

Area A, Level D:1–3. K. 3, 4, 5, 16, 26, 42, 51, 63, 65, 67, 70 (D:2).
K. 27, 53 (D:3).
Area C, Level E:2. K. 35.
Area D, Levels B:1–2, C. K. 10 (C).
Area E, House III, Levels 2–4.
Houses IV–VII, all levels dug. K. 48, 61.
Tomb 3, Burial period B. K. 29.
Tomb 19, Burial periods C-E.
Trench 6, L.C. III level. K. 44.

L.C. IIIB. Band style and plain wares as above; Submycenaean ware; wheel-made Bucchero ware; black hand-made incised ware. Ca. 1150–1050 B.C.[55]

Area A, Levels E-G. K. 6, 22, 41 (E).
Tomb 19, Burial period F.

The following disturbed deposits cover a wider range of time, and offer no basis for a stratigraphical subdivision. They do not contain intrusive elements, and thus possess a limited chronological value.

Area D, Cellar. L.C. IIA-C, some perhaps early L.C. IIIA.
K. 1, 2, 8, 9, 24, 28, 40, 58, 62, 72, 73, 75, 81, 82.
Tomb 5, disturbed section. L.C. IIA–L.C. IIIA. K. 50.
Tomb 13. L.C. I–IIB. K. 86.
Tomb 17. L.C. IIA–L.C. IIIA. K. 20, 57, 77, 78.

The other inscriptions were surface finds, or came from sections so disturbed as to be stratigraphically useless. Many of these, however, can be dated by the known chronological range of the

[54] My differentiation of L.C. IIIA and B does not correspond to that of Sjöqvist, whose A and B are both phases of my A. There was, for the most part, only one L.C. IIIA building level at Kourion, though repairs to the houses show that the period was a long one. Our tomb 19 contained one burial, B, at the threshold between the L.C. IIC and L.C. IIIA periods; three burial periods, C, D, and E, of the L.C. IIIA period, and one of the L.C. IIIB period. The material from Idalion and Kourion makes it possible in many cases to distinguish between early and late in the L.C. IIIA period. There is, however, no cultural or historical break, and the subdivision suggested by Sjöqvist is artificial and likely to be misleading.

I have indicated (*AJA*. xliv, p. 556, n. 3), and hope soon to state more fully, my reasons for being unable to agree with Sjöqvist's contention that my L.C. IIIB is the same as his Cypro-Geometric I, and that it should be dated after 1075 B.C. Sjöqvist is mistaken in thinking (*Problems*, p. 132, n. 4) that I have changed other than details of my former view. Not only is the L.C. IIIB material from Kourion stylistically earlier than Sjöqvist's earliest Cypro-Geometric I from Lapithos, but it precedes that same ware at Kourion. The earliest of the Swedish expedition's tombs at Lapithos, nos, 406, 417, and 420, are transitional from the L.C. IIIB to the geometric period. On the Bamboula site, L.C. IIIB pottery is stratified directly over that of L.C. IIIA, and is found in several typical tombs of the Late Bronze Age (Univ. Mus. *Bulletin*, vol. 8, no. 1, pp. 11 f.). The Kourion evidence is confirmed by the excavations at Apliki, where Miss Joan du Platt Taylor found L.C. IIIB ware at a purely Bronze Age site (*ILN*. Feb. 24, 1940, p. 251. Miss Taylor uses the term L.C. IIIB as I do). In order to accept Sjöqvist's date of 1075 B.C., one would be forced to assume that poor L.C. IIIA houses of mud brick stood intact for one hundred and fifty years, which is most unlikely. It is a severe strain on the aging heirloom theory to assume that the "Granary Class" of Helladic pottery neither appeared nor was reflected in Cyprus until at least a century after its appearance in Greece. A careful study of the early Geometric pottery of Cyprus is badly needed.

[55] The black hand-made incised ware is of the type discussed in *AJA*. xli, pp. 72–75. For the date of the L.C. IIIB period, see n. 54.

wares on which they are inscribed. In the following catalogue, dates so ascertained are placed in parentheses. Dates not in parentheses are stratigraphically fixed.

Catalogue of Inscriptions

Found on the Bamboula site, Kourion, by the Cyprus Expedition of the University Museum[56]

Class I

Inscribed on objects of indubitably Cypriote manufacture (figs. 13–14)

1. After baking. Jug handle. L.C. II plain ware. Area D, Cellar. L.C. II.
2. After baking. Pithos rim. L.C. II plain ware. Area D, Cellar. L.C. II.

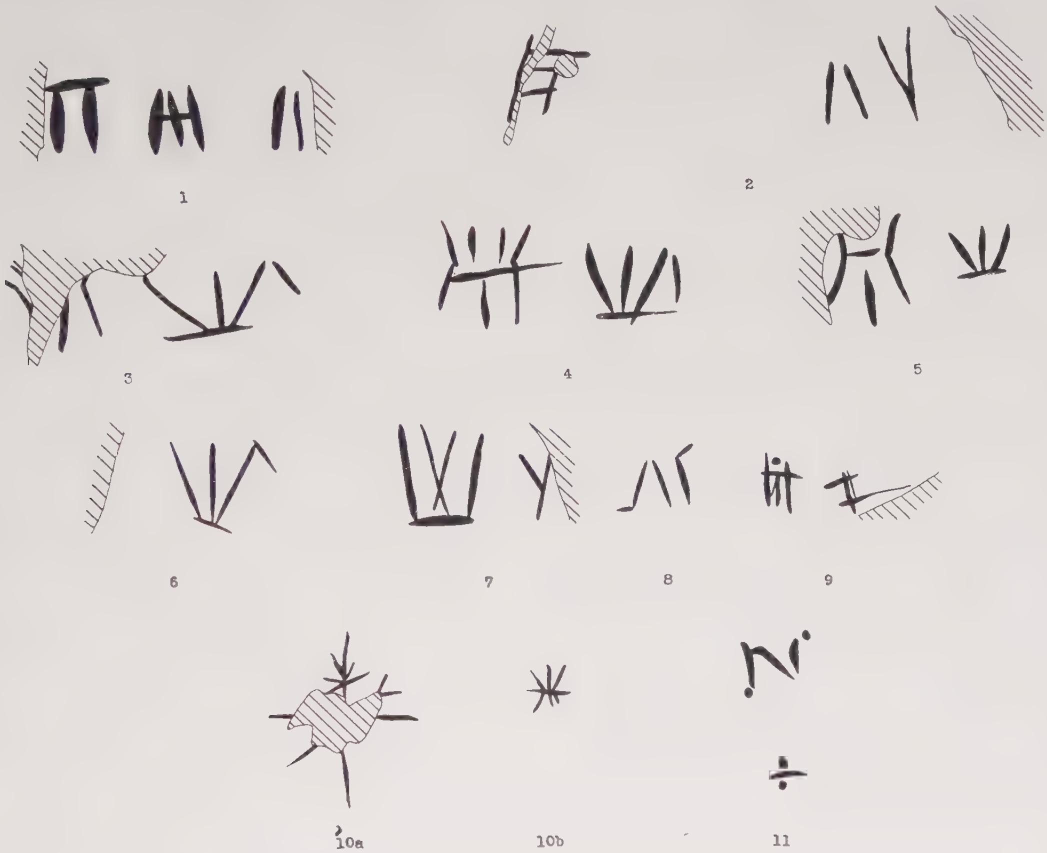


Fig. 13.—Inscriptions of Class I from Kourion. Scale 1:2

3. Leather hard. On rim of amphora with vertical handles on shoulder; complete; h. 0.59 m. L.C. III plain ware. Area A, Level D:2. L.C. IIIA. (Daniel, *AJA* xlii, 1938, pp. 272–4, fig. 13:b; *ibid.*, xliii, 1939, p. 103 f., figs. 1, 2:b; Casson, *Iraq* vi, pp. 40, 44, no. 3).

[56] The illustrations are from tracings of squeezes made by Mr. and Mrs. John Young. All breaks which affect the signs are indicated. The inscriptions are of five technical types: incised on stone; painted (Class III); impressed while the clay was soft; incised with a knife or similar tool, while leather hard, prior to firing; similarly incised after firing. It is sometimes difficult to distinguish between incisions made while leather hard and those made after firing. Inscriptions made after firing often have many successive strokes of the knife within the incision, and scratches where the knife slipped around the incision. Inscriptions cut while leather hard are cleaner, and the surface coloration of the vase often continues into the incision. K. 14 was painted after incising, but before firing. In the following catalogue I list (1) the manner of inscribing, (2) the object inscribed, (3) the ware, (4) the place of discovery, (5) the date (see paragraph above), and (6) bibliography. The inscriptions are on sherds unless otherwise noted.

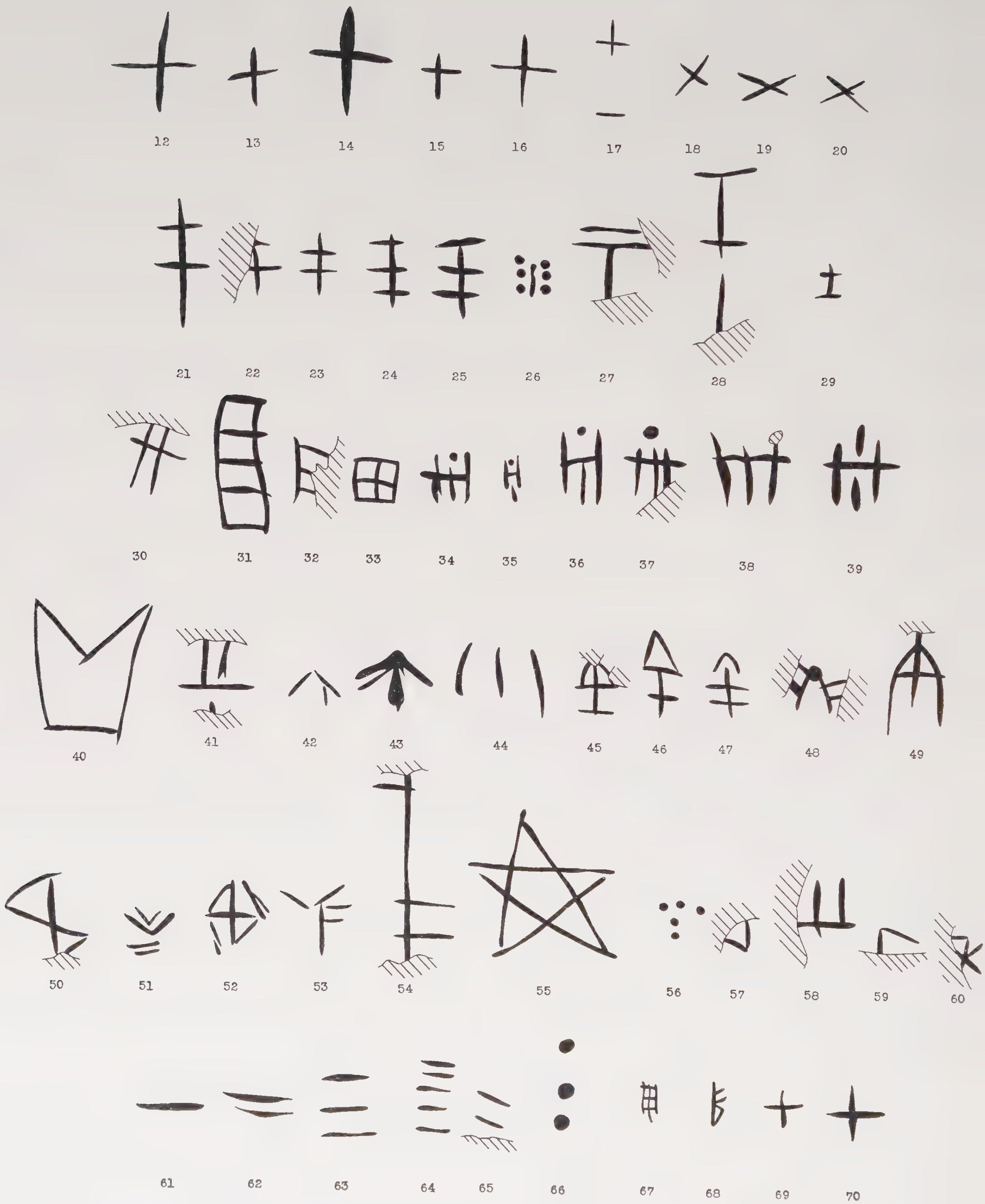


FIG. 14.—INSCRIPTIONS OF CLASS I FROM KOURION. SCALE 1:2

4. As above. H. 0.62 m. Area A, Level D:2. L.C. IIIA. (Daniel, *l.c.*, 1938, pp. 272–4, fig. 13:a; *l.c.*, 1939, pp. 102 f., fig. 2:a; Casson, *l.c.*)
5. As above; neck and shoulder only. Area A, Level D:2. L.C. IIIA. (Daniel, *l.c.*, 1938, pp. 272–4, fig. 13:c; *l.c.*, 1939, pp. 102 f., fig. 2:c; Casson, *l.c.*)
6. As above; broken; only last sign preserved. Area A, Level E. Stray in L.C. IIIB level.
7. Leather hard. Jug handle. L.C. I-II plain ware. Stray find (L.C. I–II).
8. Leather hard. On body of jug; incomplete; diam. 0.12 m. Late Base Ring II ware. Area D, Cellar (L.C. IIC.)
9. After baking. Base of bowl. L.C. IIIA painted ware. Area D, Cellar (L.C. IIC–L.C. IIIA).
10. After baking. On either side of flat circular loom-weight. Area D, Level C. L.C. IIIA.
11. Impressed while damp. Jug handle. L.C. II plain ware. Tomb 19, Burial period A. L.C. IIB.
12. Leather hard. Jug handle. Wash ware. Area C, Level C:1. L.C. IB.
13. After baking. Near bottom of lifted horizontal handle. Plain wheel-made ware. Area C, Level C:1. L.C. IB.
14. Leather hard; painted over after incising. Jug handle. Wash ware. Broken off. Area E, not stratified (L.C. I–IIB).
15. Leather hard. Handle. L.C. II plain ware. Area A, not stratified (L.C. II).
16. Leather hard. On handle of jug; incomplete; diam. 0.181 m. L.C. III plain ware. Area A, Level D:2. L.C. IIIA (Daniel, *AJA*. 1938, p. 272 f., fig. 13:d.)
17. Leather hard. Jug handle. Shaved ware. Area C, Level C:2. L.C. IIA.
18. Leather hard (?). Near bottom of lifted horizontal handle. Plain ware. Area C, Level C:1. L.C. IB.
19. After baking. At base of krater handle. L.C. II plain ware. Area A, Level B:4. L.C. IIB.
20. After baking. Jug handle. L.C. II–III plain ware. Tomb 17. L.C. II–III.
21. After baking. Handle of trefoil jug; complete; h. 0.19 m. Wash ware. Tomb 12, Burial period B. L.C. IA:2.
22. After baking. Body of vase. L.C. II hand-made plain ware. Area A, Level E. Stray in L.C. IIIB level.
23. Impressed before baking. Interior of bowl. Red wash ware. Area A, not stratified. Date uncertain. (Daniel, *AJA*. 1938, p. 272 f., fig. 13:h).
24. Leather hard. Jug handle. L.C. II plain ware. Area D, Cellar. L.C. II.
25. Leather hard. Jug handle. L.C. III plain ware. Area A, not stratified (L.C. III). (Daniel, *AJA*. 1938, p. 272 f., fig. 13:m.)
26. After baking. Jug handle. L.C. III plain ware. Area A, Level D:2. L.C. IIIA.
27. Leather hard. Jug handle. Wash ware. Broken off. Area A, Level D:3. L.C. IIIA.
28. Inscribed while clay was slightly damp. Jug handle. L.C. II plain ware. Broken off. Area D, Cellar. L.C. II.
29. After baking. Exterior of bowl; complete; diam. 0.155 m. L.C. III painted ware. Tomb 3, Burial period B. L.C. IIIA.
30. After baking. Jug handle. L.C. II plain ware. Area C, not stratified (L.C. II).
31. After baking. Jug handle. Wash ware. Area A, not stratified (Daniel, *AJA*. 1938, pp. 272 f., fig. 13:j; Casson, *Iraq* vi, p. 40 f., no. 4).
32. After baking. Pithos rim. L.C. II–III plain ware. Broken off. Area C, not stratified (L.C. II–III).
33. After baking. Handle of small jug. L.C. II plain ware. Area A, Level B:5. L.C. IIB.
34. After baking. Jug handle. Wash ware. Area C, Level D:2. L.C. IIB.
35. After baking. Near bottom of jug handle. L.C. II plain ware. Area C, Level E:2. L.C. IIIA.
36. Leather hard. Near bottom of jug handle. L.C. III plain ware. Area A, not stratified (L.C. III). (Daniel *AJA*. 1938, pp. 272 f., fig. 13:f.)
37. After baking. Jug handle. L.C. II–III plain ware. Area A, not stratified (L.C. II–III). (Daniel, *AJA*. 1938, pp. 272 f., fig. 13:e.)
38. After baking. Handle of amphoroid krater. L.C. III plain ware. Area A, not stratified (L.C. III). (Daniel, *AJA*. 1938, pp. 272 f., fig. 13:k).
39. After baking. Jug handle. L.C. III plain ware. Area A, not stratified (L.C. III).
40. After baking. Shoulder of pithos. Hand-made plain ware. Area D, Cellar. L.C. II.

41. Leather hard. Jug handle. L.C. II–III plain ware. Area A, Level E. Stray in L.C. IIIB level.
42. Leather hard. On handle of jug; incomplete; diam. 0.229 m. L.C. III plain ware. Area A, Level D:2. L.C. IIIA.
43. Inscribed while damp. Near bottom of handle. L.C. II–III plain ware. Area A, not stratified. (L.C. II–III).
44. After baking. Pithos rim. L.C. III plain ware. Trench 6, L.C. III level. L.C. IIIA.
45. Leather hard. Pithos rim. L.C. II plain ware. Tomb 2, Burial period A. L.C. IIA.
46. Leather hard (?). Jug handle. L.C. III plain ware. Area E, not stratified (L.C. III).
47. Leather hard. Bowl handle. L.C. II plain ware. Stray find (L.C. II).
48. Leather hard. Jug handle. Base Ring II ware. Area E, House V. L.C. IIIA.
49. After baking. Jug handle. Wash ware. Broken off. Area C, Level C:1. L.C. IB.
50. Leather hard. Jug handle. L.C. II plain ware. Broken off. Tomb 5 (L.C. II).
51. Leather hard. Handle of small jug. L.C. III plain ware. Area A, Level D:2. L.C. IIIA.
52. Inscribed while slightly damp. Jug handle. L.C. II plain ware. Area E, House VII. Not stratified. (L.C. II).
53. Leather hard. Pithos handle. L.C. III plain ware. Area A, Level D:3. L.C. IIIA.
54. After baking. Broad handle. Wash ware. Broken off. Area C, Level C:1. L.C. IB.
55. Leather hard. Jug handle. Wash ware. Stray find (L.C. I–IIB).
56. Drilled, probably after baking. Jug handle. L.C. II plain ware. Stray find (L.C. II).
57. After baking. Jug handle. L.C. II plain ware. Broken off. Tomb 17 (L.C. II).
58. After baking. Pithos rim. L.C. II plain ware. Broken off. Area D, Cellar. L.C. II.
59. Incised while slightly damp. Jug handle. L.C. II plain ware. Broken off. Stray find (L.C. II).
60. Leather hard. Jug handle. L.C. II plain ware. Broken off. Tomb 28. L.C. IIB.
61. Incised while slightly damp. Jug handle. L.C. III ware. Broken above incision. Area E, House IV, level 2. L.C. IIIA.
62. After baking. Jug handle. L.C. II plain ware. Area D, Cellar. L.C. II.
63. Leather hard. Jug handle. L.C. II–III plain ware. Area A, Level D:2. L.C. IIIA.
64. Leather hard. Handle of small jug. L.C. III painted ware (?). Area A, not stratified (L.C. III?).
65. Leather hard. Handle of small jug. L.C. III plain ware. Area A, Level D:2. L.C. IIIA.
66. Drilled, probably after firing. Jug handle. L.C. I–II plain ware. Stray find (L.C. I–II).
67. On either side of a rectangular piece of steatite. 0.022 x 0.012 x 0.005 m. Area A, Level D:2. L.C. IIIA.
68. Deeply cut on roughly oval pendant of light green steatite. Stray find. Date not certain.[56a]
69. Inscribed after baking on belly of female figurine. H. as preserved, 0.065 m. Area C, not stratified.
70. Cut across patterns of cylinder seal of grey steatite. L. 0.022 m. Area A, Level D:2. L.C. IIIA. The inscription was made after the engraving of the seal. For this reason it is not included in the list of seals possessing inscriptions which are an integral part of the design.

Class II

Inscribed on Mycenaean pottery:[57] Fine ware (fig. 15)

71. After baking. Handle of three-handled jar. Area C, Level E:1. L.C. IIC.
72. As above. Area D, Cellar. L.C. II.
73. As above. Area D, Cellar. L.C. II.
74. After baking. On base of krater; nearly complete; h. 0.293 m. L.H. IIIB:2. Tomb 6. L.C.IIB. (Daniel, University Museum *Bulletin*, vol. 8, no. 1, pl. IV:b.)
75. After baking. Handle of three-handled jar. Area D, Cellar. L.C. II.

Class III

Dipinti in matt red paint on Mycenaean[58] pottery: Fine ware (fig. 15)

76. On side of bowl; complete; diam. 0.205 m. Bands int. and ext.; on lower middle band int., a running zigzag in matt cream paint. Tomb 6. L.C.IIB (fig. 10).

[56a] Owing to an error in tracing, this sign is shown as if seen in a mirror. [57] See n. 23. [58] *Ibid.*



FIG. 15.—INSCRIPTIONS OF CLASSES II AND III FROM KOURION. SCALE: 71–75, 1:1

77. On base of large krater. Diam. of base 0.113 m. Broken off. Tomb 17 (L.C. IIA–B).
78. On wide flat base of closed vase. Broken off. Tomb 17 (L.C. II).

CLASS IV

Inscribed after baking on false-necked jars of coarse tempered ware (fig. 16)

79. On *discus*. Area B, well. Stray in Iron Age deposit (L.C. II).
80. On handle. Stray find (L.C. II).
81. On handle. Badly worn. Area D, cellar. L.C. II.

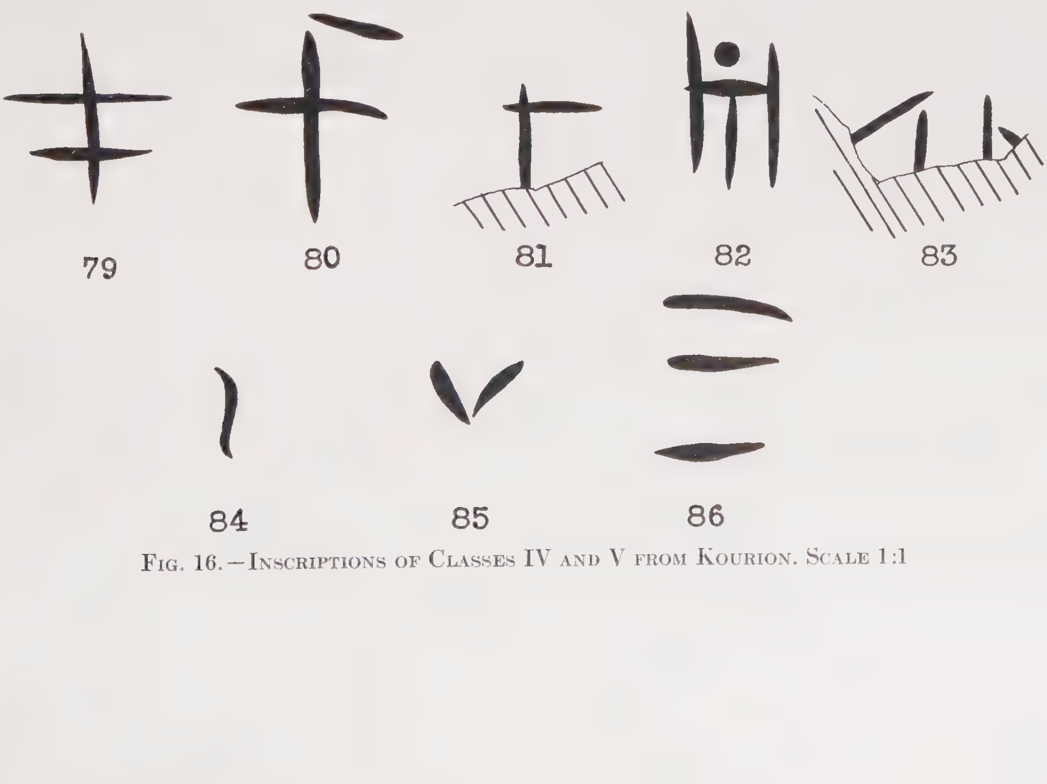


FIG. 16.—INSCRIPTIONS OF CLASSES IV AND V FROM KOURION. SCALE 1:1

82. On handle. Vase nearly complete; has depressed *discus;* h. 0.338 m. Area D, Cellar. L.C. II. (fig. 11, p. 267).
83. On handle. Broken off. Area A, Level A:3. L.C. IIA.

Class V

Impressed before baking on imported wheel-made red burnished ware (fig. 16)

84. At base of handle. Tomb 26. L.C. IIA.
85. On bottom of elongated bottle; complete; h. 0.314 m. Tomb 12, Burial period B. L.C. IA:2.
86. On bottom of elongated bottle; complete; h. 0.246 m. Tomb 13. L.C. I–II.

Appendix II

A complete and accurate tabulation of all graphic signs known from Bronze Age contexts in Cyprus is attempted in the following table. For the bibliography, Casson's, Persson's, and Schaeffer's lists are collated, and reference is made to the original or most authoritative publication of each inscription. Only the most glaring inaccuracies of my predecessors are noted. Several unpublished inscriptions are listed here for the first time. An asterisk in the note column indicates that my drawing was made from the original inscription; a dagger shows that it is based upon an apparently reliable publication. In the latter case, I have drawn wherever possible on photographs.

The signs are arranged in sequence according to the number of vertical and horizontal lines they contain. Signs with one vertical line are treated before those with two, and so on. Priority within each group is based on the number of horizontal lines. Characters with diagonal lines follow those with rectangular, according to the same principle. Characters which have no vertical or horizontal lines follow those which do. Numerals come last of all. The sequence is occasionally disregarded, in order to group together related signs which would otherwise be separated.

The following abbreviations are used in this appendix:

BM., H. B. Walters, *Catalogue of the Greek and Etruscan Vases in the British Museum*, i, part ii, *Cypriote, Italian, and Etruscan Pottery*, London, 1912.

C., Stanley Casson, *Ancient Cyprus*, London, 1937. Table of signs, pp. 98–107. In referring to this list I give first the abbreviation, C., then Casson's number for the sign, and then a letter, a, b, c, etc., to indicate the first, second, or third example, respectively, of that sign in Casson's list. Thus C.1c is Casson, sign 1, example 3.

CC., John L. Myres, *The Metropolitan Museum of Art, Handbook of the Cesnola Collection of Antiquities from Cyprus*. New York, 1914.

C.Ir., Stanley Casson, *The Cypriote Script of the Bronze Age*, *Iraq* vi, 1939, pp. 39–44.

K., Catalogue of inscriptions found at Kourion. Appendix I, figs. 13–16, above.

M., M. Markides, *Cyprus, Annual Report of the Curator of Antiquities, 1916*, Nicosia, 1917, pp. 16 ff. I have not seen this rare publication, and have been forced to rely on Casson's and Persson's often conflicting reports. I have, however, studied most of the original inscriptions in the Cyprus Museum. Persson, P.II.1–11, lists the inscriptions in the order which Casson attributes to the original publication, save that P.II.1 is the inscription listed by Casson as M.3, P.II.2 is that called M.1, and P.II.3 is M.2. I follow Casson's numeration.

Myres, John L. Myres, "A Cypro-Mycenaean Inscription from Enkomi, near Salamis in Cyprus," *Man* xxxix, 1934, no. 26.

P., Axel W. Persson, "More Cypro-Minoan Inscriptions," in *The Swedish Cyprus Expedition*, iii, Stockholm, 1937, pp. 601–618, Appendix I. P.I. refers to the list of inscriptions, pp. 602–603; P.II. refers to the list of inscriptions, pp. 606–607. I keep Persson's numbering, using the letters of the alpha-

bet to indicate the position of individual signs within the inscriptions. Thus P.I.20c is Persson, list I, inscription 20, third sign from left. In the few cases in which Persson lists inscriptions as a and b, I use numbers to indicate the individual characters. Thus P.II.2b3 is Persson, list II, inscription 2b, sign 3.

PE. Axel W. Persson, "Some Inscribed Terracotta Balls from Enkomi," in *Symbolae Philologicae O. A. Danielsson Octogenario Dicatae*, Uppsala, 1932, pp. 269–273. Here, again, I employ numbers to indicate the position of signs within the inscriptions.

S. Inscriptions on cylinder seals, fig. 12, above.

SM., Claude F. A. Schaeffer, *Missions en Chypre, 1932–1935*, Paris, 1936, pp. 119–121, Appendice I.

Class I

Inscribed on objects of Cypriote manufacture

	Examples	*Total*	*Notes*
1a	K.11–17, 69–70		=III:1a, IV:1, V:1.
	C.26a = PE.a8		For K.70 see appendix I.
	C.26d		*
	P.I:18, 22a		
	Myres, fig. 2:4	14	
1b	K.18–20	3	=II:1, III:1b, VI:1. *
1c	PE.c2	1	=I:1b (?). †
2	C.27a = PE.d2		=II:2, III:2, IV:2, VI:2.
	C.27d		PE.d2 not noticed by
	P.I.19b		Persson. †
	PE.e3	4	
3	K.9, 21–23		=II:3, IV:3, VI:27.
	C.1a = P.II.2a = M.1		For C.1f, see III:12.
	C.1b = P.II.3a = M.2		*
	C.1c = P.II.9b = M.9		
	C.1d = P.II.11b = Myres:2		
	C.1h = PE.a4		
	C.1i = PE.b3		
	C.1j	11	
4a	K.27		=V.2.
	C.23a = P.II.9e	2	C.23b not Bronze Age. *
4b	K.28	1	=VI:12 (?). *
5	K.29	1	=II:4a. *
6a	K.24–25		=II:5, III:4, VI:3. *
	C.2a = P.II.1 = M.3		
	P.I.22b	4	
6b	K.26	1	*
7	K.54	1	*
8	C.18	1	*
9	K.8	1	=V:7 (?). *
10	K.1, 42–44		=VI:4a. *
	C.20		
	P.I.22c	6	
11	C.6 = P.II:11d = Myres:6	1	=II:9, III:5. *
12a	K.45	1	=II:10a, VI:5a. *
12b	C.9 = P.II.3b	1	=II:10b, VI:5b.
12c	K.46	1	*
13	K.47		C.10a inaccurate.
	C.10a = P.II.11c = Myres:3		P.I.21d clearer in fig. 315.
	C.17a = PE.b2		*
	C.17b = PE.d1		
	C.17c		
	C.17d = *Exc.Cyp.*, p. 15, no. 1535		
	P.I.21d		
	PE.a7		
	Cyp. Mus., unpub.	9	
14	C.11 = P.II.9f = M.9	1	P.II.9f inaccurate. *
15	K.49		=VI:6 (?).
	C.15a	2	C.15a inaccurate. *
16	K.41	1	*
17a	K.5, 10a (?)	1–2	*
17b	K.3–4, 6	3	For right-hand dash, see *AJA*. xlii, p. 274. *
18	Ingot in Cyprus Museum, unpub.	1	*
19	P.I.20c	1	Inaccurate in chart; cf. fig. 314. †
20	K.59		=II:16, IV:5, VI:16. †
	PE.c6		
	P.I.21b (?)	1–3	
21	K.11	1	*
22	C.14	1	*
23	K.53	1	*
24	K.68	1	Date uncertain.* [56a]
25	K.52	1	*
26	K.1	1	=V:3. *
27	K.30	1	*
28	K.31	1	=VI:21 (?). *
29	K.2, 32	2	K.2 retrograde. *
30	K.7, 40	2	*
31	C.31a = P.II.2b3 = M.1		C.31c is V:7. *
	C.31b = P.II.10a = M.10	2	
32	C.41 = P.II.2b2 = M.1	1	
33	K.58		=II:8, VI:7. *
	PE.e6 (?)	1–2	
34	C.3 = P.II.4 = M.4		
	C.5 = P.II.9a = M.9	2	*
35	C.4a = P.II.2b = M.1	1	My drawing is a compromise between C. and P. I have not seen the original.

36a	K.1, 38 P.I.21a (?)	2–3	P.I.21a is incomplete; cf. fig. 315. *
36b	K.39	1	*
36c	C.29a = PE.b1	1	†
36d	PE.c1, e1	2	†
36e	Ingot in Cyprus Mus., unpub.	1	*
36f	K.10b	1	*
36g	C.29b = PE.d3	1	†
37	K.9, 34–37 P.II.2b4 = M.1 (?)	5–6	= IV:4, VI:8. For P.II2b4, cf. I:35. *
38	K.3–5 C.34b = PE.e5	4	= VI:9 C.34a is I:40. *
39	P.I.20b	1	If the last vertical bar is punctuation, this may be the same as I:40. †
40	C.34a = PE.c3	1	†
41	C.24b = P.II.9c = M.9	1	P. and C. inaccurate. *
42	K.33, 67	2	*
43	C.28 = PE.a5	1	†
44	C.33a = PE.a1	1	C. fails to distinguish between I:44 and I:45. †
45	C.33b = PE.a6	1	Cf. I:44, note. †
46	K.2, 7	2	= III:8, VI:17. *
47	K.10a P.I.20a P.I.21c PE.c5	3–4	= V:4. *
48	K.2 C.30 = P.II.10b = M.10	2	= II:11, V:5. P.II.10b inaccurate. *
49	K.8	1	*
50	K.48 C.19	2	C.19 does not have the dot at the top. *
51	C.13 = P.II.3c = M.2.	1	Perhaps = I.50.
52	C.35 = P.II.9d = M.9	1	P. inaccurate; C. worse. *
53	C.21	1	
54	K.51	1	*
55	C.12a = P.II.5 = M.5 C.12b = P.II.6b = M.6	2	= II:12. P.II.6 shows sign b alongside I:65. Actually I:65 is horizontal, under I:55. *
56	C.25 = PE.b4	1	†
57	C.24a = PE.a3 PE.c4 PE.e4	3	= VI:10. C.24b is I:41. †
58	K.50	1	= III:6. *
59	K.60 C.7 = P.II.11e = Myres:7	2	*
60	K.55	1	*
61	C.36b = P.II.11a = Myres:1	1	C. inaccurate. *
62	C.32 = PE.a2	1	†
63	K.56	1	*
64	K.17, 61	2	= II:24. *
65	K.62 C., num. c = P.II.6a = M.6.	2	See I:55, note. *
66	K.65	1	*
67	K.63 P.I.19a	2	= V:8. For C., num. c, see I:72, note. *
68	C.,num.e = P.II.8 = M.8	1	
69	K.64	1	*
70	C.16a	1	= V:9. Cyprus Mus. 1503. *
71	C., num. c = P.II.2b1 = M.1	1	= II:25.
72	C., num. c-d = P.II.7 = M.7	1	C. separates into component parts. *
73	K.66	1	*

Class II

Signs incised on Mycenaean pottery: fine ware

1	P.I.13b	1	= I:1b, III:1b, VI:1.
2	C.27c = P.II = BM.C523 P.I.3–7, 12d2	8	= I:2, III:2, IV:2, VI:2. P.I.3b, (4, 5, 6?), 12 drawn backwards: cf. figs. 318, 319. †
3	C.1e = P.II = BM. C430	1	= I:3, IV:3, VI:27. †
4a	P.I.8–10, 12a4	4	= I:5. Drawn upside down; cf. fig. 316, and the verbal descriptions of P.I.8–9.†
4b	P.I.11b	1	Upside down in drawing; cf. fig. 320. †
5	P.I.2–12 C.1g = CC.438	13	= I:6a, III:4, VI:3. CC.438 wrongly published with two crossbars. *
6	K.71	1	= III:15a. *
7	C.38a = CC.434	1	*
8	K.72	1	= I:33, VI:7. *
9	K.73 P.I.12a3 (?)	1–2	= I:11, III:5. For P.I.12a3 cf. fig. 318; the lower horiz. line of the drawing does not show in the photograph. *
10a	C.10b = P.II = BM.C523	1	= I:12a, VI:5a. †
10b	P.I.17a	1	= I:12b, VI:5b. †
11	P.I.13a P.I.14a–b	3	= I:48, V:5.
12	C.12c = P.II = BM.C434	1	= I:55. †

13		C.42	1	*
14		C.36a=CC.438	1	C. and CC. backwards. *
15		C.22=P.II= BM.C379	1	†
16a		P.I.17b		=I:20, IV: 5, VI:16.
16b		Cyprus Museum, unpublished	1	=V:6(?). *
17		C.51=BM.C11092	1	*
18		P.I.14c P.I.15	2	†
19a		C.48a=P.II= BM.C434	1	=VI:11. †
19b		C.49=BM.C11091	1	*
19		C.50=BM.C11094	1	*
20		C.39=CC.438	1	Vertical bar of CC. a fault in the vase, not part of inscription. The horizontal bar may be a numeral. Printed in CC. and C. as if seen in a mirror. *
21a		P.I.12b	1	Upside down; cf. fig. 318. †
21b		BM.C11003	1	=III:18. *
22		P.II=BM.C430	1	†
23		K.74	1	*
24		K.75	1	=I:64. *
25		BM.C11093	1	=I:71.*

Class III

Dipinti in matt red paint on Mycenaean pottery: fine ware

1a		K.77 (?) C.26e=SM.V C.26f=SM.X	4–5	=I:1a, IV:1, V:1.
1b		C.26c=P.II= SM.XXII= BM.C412	1	=I:1b, II:1, VI:1.
1c		C.Ir.1=CC.437	1	*
2		C.27e	1	=I:2, II:2, IV:2, VI:2.
3		C.Ir.2=CC.417	1	*
4		P.I.1 C.2b=P.II= SM.XVIII= BM.C514	2	=I:6a, II:5, VI:3. †
5		C.52	1	=I:11, II:10.
6		C.57=SM.XIII	1	=I:58.
7		C.58=SM.XVII= BM.C477	1	†
8		K.76:a	1	=I:46, VI:17. *
9		C.15b=SM.XV	1	
10a		C.15c=P.II= SM.XIX= BM.C555	1	†
10b		C.56=SM.XII	1	
11		C.55=SM.XI	1	
12		C.1f=SM.XVI= P.II=BM.C391	1	†
13		K.76:b	1	*
14		C.54=SM.VII	1	
15a		C.4c=SM.XXI= BM.C583	1	=II:6.
15b		C.4b=SM.IX	1	
16		C.53=SM.VI	1	
17		C.8	1	
18		C.46c=SM.VIII C.46d=SM.XIV	2	=II:21b.
19		SM.XX=BM.C575	1	Wrong side up in SM.?

Class IV

Inscribed on false-necked jars of coarse-tempered ware

1		K.81	1	=I:1a, III:1a, V:1. *
2		C.27b=P.II= BM.C501	2	=I:2, II:2, III:2, VI:2. *
3		K.79	1	=I:3, II:3, VI:27. *
4		K.82	1	=I:37, VI:8. *
5		K.80	1	=I:20, II:16a, VI:16. *
6		K.83	1	*

Class V

Impressed before firing on imported red burnished wheel-made pottery

1		C.26b=CC.378	1	=I:1a, III:1a, IV:1. *
2		C.23c=CC.377	1	=I:4a. *
3		Sjöqvist, *Problems*, *p.* 53, type 2a	1	=I:26. †
4		K.85	1	=I:47. *
5		C.40=CC.379	1	=I:48, II:11. *
6		C.37=CC.376	1	=II:16b (?). *
7		K.84	1	=I:9 (?). *
8		K.86	1	=I:67. *
9		C.16b=BM.C191	1	=I.70. †

Class VI

Signs engraved on cylinder seals

1		S.3	1	=I:1b, II:1, III:1b. †
2		S.2	1	=I:2, II:2, III:2, IV:2. †
3		S.3	1	=I:6a, II:5, III:4. †
4a		S.1=C.45a S.3 S.5 S.7=C.45b	4	=I:10. †

4b		S.6	1	†
5a		S.7	1	=I:12a, II:10a. †
5b		S.1	1	=I:12b, II:10b. †
6		S.6	1	=I:15. †
7		S.2	1	=I:33, II:8. †
8		S.4=C.46a S.10=C.46b	2	=I:37, IV:4. †
9		S.1=C.34c	1	=I:38. †
10		S.1=C.24c	1	=I:57. †
11		S.9=C.48b	1	=II:19a. †
12		S.1=C.23d	1	=I:4b (?). †
13		S.8=P.I.23b	1	†
14		S.9=C.59	1	†
15		S.8=P.I.23a	1	†
16		S.2	1	=I:20, II:16, IV:5. †
17		S.6	2	=III:8. †
18		S.3	1	Perhaps not script. †
19		S.6	1	†
20		S.6	1	†
21		S.2	1	=I:28 (?). †
22		S.6	1	†
23		S.10=C.61	1	C. from Dussaud; both inaccurate. †
24		S.10=C.60	1	†
25		S.7=C.38b	1	C. inaccurate. †
26		S.7=C.47	1	†
27		S.5	1	=I:3, II:3, IV:3. †

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